



ROY COOPER
Governor

MICHAEL S. REGAN
Secretary

MICHAEL A. ABRACZINSKAS
Director

DRAFT

Mr. Jason Haynes
Plant Manager
Duke Energy Progress, LLC.
1700 Dunnaway Road
Semora, NC 27343

SUBJECT: Air Quality Permit No. 01001T52
Facility ID: 7300029
Duke Energy Progress, LLC - Roxboro Steam Electric Plant
Semora, Person County, North Carolina
Fee Class: Title V
PSD Class: Major

Dear Mr. Haynes:

In accordance with your completed Air Quality Permit Application for a 02Q .0501(d)(1) Significant Title V permit modification received June 12, 2017, we are forwarding herewith Air Quality Permit No. 01001T52 to Duke Energy Progress, LLC - Roxboro Steam Electric Plant, Roxboro, Person County, North Carolina authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an ATTACHMENT. Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the condition(s) of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

Mr. Jason Haynes

DRAFT

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The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Person County has triggered increment tracking under PSD for PM-10 and SO₂. However, this permit modification does not consume or expand increments for any pollutants.

This Air Quality Permit shall be effective from _____ until January 31, 2019, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

The changes made to the permit are summarized in an attachment to this letter. Should you have any questions concerning these changes, please contact Mr. Edward L. Martin, P.E., at (919) 707-8739 or ed.martin@ncdenr.gov.

Sincerely,

William D. Willets, P.E., Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

c: Heather Ceron, EPA Region 4
Raleigh Regional Office
Connie Horne (cover page only)
Central Files

Insignificant Activities under 15A NCAC 02Q .0503(8)

| Emission Source I.D. | Emission Source Description |
|-----------------------------|---|
| IS-1 | No. 2 fuel oil tank; 100,000 gallons |
| IS-2 | No. 2 fuel oil tank; 500,000 gallons |
| IS-3 | Lube oil storage tank; 8,000 gallons for U1 turbine lube oil |
| IS-4 | Lube oil storage tank; 8,000 gallons for U2 turbine lube oil |
| IS-5 | Two lube oil storage tanks; 9,000 gallons each for U3&4 turbine lube oil |
| IS-6 | Bulk lube oil tank; 7,500 gallons at U1&2 |
| IS-7 | Batch lube oil tank; 12,000 gallons at U1&2 |
| IS-8 | Batch lube oil tank; 15,000 gallons at U3&4 |
| IS-9 | Gasoline tank; 1,500 gallons at A Warehouse |
| IS-10 | One kerosene tank; 250 gallons (Dozer shed) |
| IS-12 | Two kerosene tanks; 1,000 gallons each for fuel oil farm\U3&4 |
| IS-13 | Ethylene glycol tank; 6,000 gallons |
| IS-14 | Diesel tank; 250 gallons for IC turbine |
| IS-15 | Diesel tank; 1,000 gallons (Bottom Ash off-road diesel) |
| IS-16 | Diesel tank; 2,000 gallons (Charah shop off-road diesel) |
| IS-17 | Ethylene glycol tank; 265 gallons (Dozer shed) |
| IS-18 | Hydraulic oil storage tank; 500 gallons (Dozer shed) |
| IS-19 | Engine oil storage tank; 500 gallons (Dozer shed) |
| IS-20 | 30 assorted lube oil storage tanks; 55 to 265 gallons each |
| IS-21 | Two used oil waste separator tanks; 500 gallons each |
| IS-22 | Used oil portable tank; 350 gallons |
| IS-24 | Two used oil portable tanks; 300 gallons each |
| IS-25 | Fuel oil storage day tank; 280 gallons for emergency fire pump |
| IS-26 | IC turbine lube oil reservoir; 1,800 gallons |
| IS-29 | Vacuum cleaner outside near the dry flyash silos |
| IS-30 | Four cooling towers that do not use chromate chemicals |
| IS-36 | Fugitive emissions from coal handling/storage, plant parking lots, paved roads, unpaved roads, coal pile and ash handling |
| IS-37 | Gypsum conveyor 1A |
| IS-38 | Gypsum emergency conveyor |
| IS-39 | Gypsum conveyor 1B |
| IS-40 | Emergency gypsum pile |
| IS-41 | Mayo gypsum rotary feeder |
| IS-42 | Mayo gypsum conveyor |
| IS-43 | Gypsum conveyor 2 |
| IS-44 | Gypsum conveyor 3 (includes 3a and 3b) |
| IS-45 | Off-specification gypsum pile |
| IS-46 | On-specification gypsum pile |
| IS-47 | Gypsum conveyor 4 |
| IS-48 | Landfill gypsum loading hopper |
| IS-49 | Landfill gypsum reclaim belt feeder |

Attachment 1, cont. to cover letter of Air Quality Permit 01001T52
Duke Energy Progress, LLC - Roxboro Steam Electric Plant

| Emission Source I.D. | Emission Source Description |
|----------------------|---|
| IS-50 | Diesel tank; 10,500 off road diesel (Dozer shed) |
| IS-51 | Unleaded gasoline tank, 500 gallons (Charah Shop) |
| IS-52 | Diesel tank; 2000 gallons (Charah Shop on-road diesel) |
| IS-53 | Diesel Tank; 1000 gallons (Charah Gypsum pad off-road diesel) |
| IS-54 | Used oil shop tank; 125 gallons (Dozer shed) |

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement.
2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit".
3. For additional information regarding the applicability of GACT see the DAQ page titled "The Regulatory Guide for Insignificant Activities/Permits Exempt Activities". The link to this site is as follows:
<http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide>.

Summary of Changes to Permit

The following changes were made to the Progress Energy - Roxboro Plant Air Permit No. 01001T51:

| New Page | New Section | Old Page | Old Section | Description of Changes |
|----------|--|----------|--|---|
| Cover | | | | Amended to reflect current permit number, issue date, effective date, and associated application information. |
| 3-4 | Section 1, table of permitted emission sources | 3 | Section 1, table of permitted emission sources | Added note for Units 1-4 (ES-Unit 1, ES-Unit 2, ES-Unit 3A, ES-Unit 3B, ES Unit 4A and ES-Unit 4B) that none of the mercury control devices or techniques shall use halogen containing compounds (for example, bromide). |
| 9-10 | Section 2.1.A, regulation table | 9-10 | Section 2.1.A, regulation table | Changed 02D .0536 particulate matter limits for PM CEMS to 0.030 pounds per million Btu heat input (or 0.30 pounds per MWh). |
| | | | | Removed 15A NCAC 02D .2500. |
| | | | | Changed section reference for MACT Subpart UUUUU from Section 2.1.A.9 to Section 2.2.B.2. |
| 13 | Section 2.1.A.3.c | 12-13 | Section 2.1.A.3.c | Removed requirement to conduct Method 9 performance tests. |
| 13 | Section 2.1.A.3.d | 13 | Section 2.1.A.3.d | Removed requirement to report the results of Method 9 performance tests. |
| 13 | Section 2.1.A.5.a | 13 | Section 2.1.A.5.a | Added that the particulate matter limits are <u>as determined by stack test</u> , for clarity. |
| 13 | Section 2.1.A.5.d | 13 | Section 2.1.A.5.d | Revised to allow the use of MATS Method 5 to demonstrate compliance with the 02D .0536 stack test requirement. |
| 13-14 | Section 2.1.A.5.e | 13-14 | Section 2.1.A.5.e | Revised monitoring/recordkeeping based on MATS requirements. |
| 14 | Section 2.1.A.5.f | 14 | Section 2.1.A.5.f | Revised reporting based on MATS requirements. |
| -- | -- | 15 | Section 2.1.A.6.c | Removed this section for periods of less than 365 days of operation of the PM CEMS. |
| 15 | Section 2.1.A.7.a | 15-16 | Section 2.1.A.7.a | Revised to indicate that the use of PM CEMS, in accordance with the applicable MACT standards in §63.10010(i) of 40 CFR Part 63 Subpart UUUUU, is an alternative monitoring and recordkeeping procedure, as allowed by Paragraph 3.9 of Appendix P of 40 CFR Part 51. |
| | | | | Revised to remove PM mg/m ³ concentrations corresponding to 0.030 pounds per million Btu heat input and revised monitor downtime to correct previous permit. |
| 16 | Section 2.1.A.7.b | 16 | Section 2.1.A.7.b | Added second, third and last sentences to correct previous omissions. |
| 16 | Section 2.1.A.7.c | 16 | Section 2.1.A.7.c | Added last sentence to correct previous omission. |
| 16 | Section 2.1.A.7.c.i | 16 | Section 2.1.A.7.c.i | Revised to remove PM mg/m ³ concentrations corresponding to 0.030 pounds per million Btu heat input and added second sentence to update condition. |

| New Page | New Section | Old Page | Old Section | Description of Changes |
|----------|---------------------------------|----------|---------------------------------|---|
| -- | -- | 16 | Section 2.1.A.8 | Removed this condition since 15A NCAC 02D .2500 MERCURY RULES FOR ELECTRIC GENERATORS has expired. |
| -- | -- | 17 | Section 2.1.A.9 | Removed this old placeholder condition for MACT Subpart UUUUU and added new MACT Subpart UUUUU condition in Section 2.2.C.2. |
| 17 | Section 2.1.B, regulation table | 18 | Section 2.1.B, regulation table | Changed 15A NCAC 02D .0524 particulate matter limit from 0.10 to 0.03 pound per million Btu heat input. |
| | | | | Removed 15A NCAC 02D .0524 visible emissions limit. |
| | | | | Removed 15A NCAC 02D .2500. |
| | | | | Changed section reference for MACT Subpart UUUUU from Section 2.1.B.4 to Section 2.2.B.2. |
| 17 | Section 2.1.B.1.b | 18 | Section 2.1.B.1.b | Revised particulate limit from 0.10 to 0.03 and removed opacity limit. |
| 18 | Section 2.1.B.1.e | 19 | Section 2.1.B.1.e | Revised to allow the use of MATS Method 5 to demonstrate compliance with the 02D .0536 stack test requirement. |
| -- | -- | 19 | Section 2.1.B.1.h | Removed Method 9 test requirement. |
| 18 | Section 2.1.B.1.h.i | 19 | Section 2.1.B.1.i.i | Added second sentence. |
| -- | -- | 20 | Section 2.1.B.1.i.vii | Removed Method 9 test recordkeeping requirement. |
| 19 | Section 2.1.B.1.i. | 20 | Section 2.1.B.1.j | Removed Method 9 test reporting requirement. |
| -- | -- | 21 | Section 2.1.B.3 | Removed this condition since 15A NCAC 02D .2500 MERCURY RULES FOR ELECTRIC GENERATORS has expired. |
| -- | -- | 21 | Section 2.1.B.4 | Removed this old placeholder condition for MACT Subpart UUUUU and added new MACT Subpart UUUUU condition in Section 2.2.C.2. |
| 22 | Section 2.1.C.2.c | 24 | Section 2.1.C.2.c | Added that the Permittee shall establish “normal” for the sources added in the dry flyash permit T51 within 30 days of commencement of operation of new or modified equipment or within 30 days of permit issuance for any sources that commenced operation prior to issuance of permit T52, which was inadvertently omitted when that permit T51 was issued. |
| 25 | Section 2.1.D.2.c | 27 | Section 2.1.D.2.c | |
| 52-58 | Section 2.2.B.2 | -- | -- | Added new MACT Subpart UUUUU condition. |
| 61-69 | Section 3.0 | 57-65 | Section 3.0 | Updated general conditions to version 5.1, 08/03/2017. |



State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

| Permit No. | Replaces Permit No. | Effective Date | Expiration Date |
|------------|---------------------|----------------|------------------|
| 01001T52 | 01001T51 | | January 31, 2019 |

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes, Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete air quality permit application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: **Duke Energy Progress, LLC –
Roxboro Steam Electric Plant**

Facility ID: **7300029**

Facility Site Location: **1700 Dunnaway Road**
City, County, State, Zip: **Semora, Person County, NC 27343**

Mailing Address: **1700 Dunnaway Road**
City, State, Zip: **Semora, NC 27343**

Application Numbers: **7300029.15A**
Complete Application Date: **June 12, 2017**

Primary SIC Code: **4911**
Division of Air Quality, **Raleigh Regional Office**
Regional Office Address: **3800 Barrett Drive**
Raleigh, NC 27609

Permit issued this the ____ day of _____, 2017.

William D. Willets, P.E., Chief, Permitting Section
By Authority of the Environmental Management Commission

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ATTACHMENTS

List of Acronyms

Acid Rain Permit Renewal Application dated June 18, 2014

Phase II NO_x Compliance Plan and Averaging Plan dated June 23, 2015

SECTION 1- PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S)

The following table contains a summary of all permitted emission sources and associated air pollution control devices:

| Page | Emission Source I.D. No. | Emission Source Description | Control Device I.D. No. | Control Device Description |
|---------------|--------------------------------|---|---|--|
| 9 52 59 | ES-Unit 1 MACT UUUUU | coal/No. 2 fuel oil ^k -fired electric utility boiler (4722 million Btu per hour nominally rated heat input) equipped with low-NO _x burner and alkaline-based fuel additive ^h , | CD-SCR1 ^a CD-ESP1 CD-FGD1 ^c CD-INJ-Sorb1 (consisting of ES-SORB-17, ES-SORB-18, ES-SORB-19 and ES-SORB-20) CD-INJ-Sorb5 ⁱ (consisting of ES-Sorb-1, ES-Sorb-2 and ES-Sorb-3) | a selective catalytic reduction system installed in series with electrostatic precipitator (Environmental Elements cold-side model) venting to wet scrubber sorbent injection system temporary sorbent injection system None of the mercury control devices or techniques shall use halogen containing compounds (for example, bromide) |
| 9 52 59 | ES-Unit 2 MACT UUUUU | coal/No. 2 fuel oil ^k -fired electric utility boiler (7035 million Btu per hour nominally rated heat input) equipped with low-NO _x burner and alkaline-based fuel additive ^h , | CD-SCR2 ^a CD-ESP2 CD-FGD2 ^c CD-INJ-Sorb2 (consisting of ES-SORB-13, ES-SORB-14, ES-SORB-15 and ES-SORB-16) | a selective catalytic reduction system installed in series with electrostatic precipitator (Environmental Elements cold-side model) venting to wet scrubber sorbent injection system None of the mercury control devices or techniques shall use halogen containing compounds (for example, bromide) |

| Page | Emission Source I.D. No. | Emission Source Description | Control Device I.D. No. | Control Device Description |
|----------------|--|--|--|--|
| 9 52 59 | ES-Unit 3A ES-Unit 3B MACT UUUUU | two coal/No. 2 fuel oil ^k -fired electric utility boilers (4261 million Btu per hour nominally rated heat input each) equipped with low-NO _x burners and alkaline-based fuel additive ^h , | CD-SCR3a & CD-SCR3b ^a CD-ESP3a & CD-ESP3b CD-FGD3 ^c CD-INJ-Sorb3 (consisting of ES-SORB-9, ES-SORB-10, ES-SORB-11 and ES-SORB-12) | two selective catalytic reduction systems (one per boiler) installed in series with two electrostatic precipitators (Lodge-Cottrell cold-side model) (one per boiler) venting to wet scrubber sorbent injection system None of the mercury control devices or techniques shall use halogen containing compounds (for example, bromide) |
| 17 52 59 | ES-Unit 4A ES-Unit 4B NSPS MACT UUUUU | two coal/No. 2 fuel oil ^k -fired electric utility boilers (4099 million Btu per hour nominally rated heat input each) equipped with low-NO _x burners and alkaline-based fuel additive ^h , | CD-SCR4a & CD-SCR4b ^a CD-ESP4a through CD-ESP4h CD-FGD4 ^c CD-INJ-Sorb4 (consisting of ES-SORB-5, ES-SORB-6, ES-SORB-7 and ES-SORB-8) | two selective catalytic reduction systems (one per boiler) installed in series with eight electrostatic precipitators (Buell hot-side model) (four per boiler) venting to wet scrubber sorbent injection system None of the mercury control devices or techniques shall use halogen containing compounds (for example, bromide) |
| 20 46 | ES-FA Handling 1 ^j | Unit 1 dry flyash pneumatic transfer system including surge bin and filter separators | CD-BF14^j CD-FS-1A^j CD-FS-1B^j | three bagfilters (one with 164 square feet of filter area and two with 727 square feet of filter area each) |
| 20 46 | ES-FA Handling 3A ^j ES-FA Handling 3B ^j ES-FA Handling 3C ^j | Unit 3 dry flyash pneumatic transfer systems and filter separators | CD-FS-3A^j CD-FS-3B^j CD-FS-3C^j | three bagfilters (727 square feet of filter area each) |
| 20 47 | ES-FA Handling 4A ^j ES-FA Handling 4B ^j ES-FA Handling 4C ^j | Unit 4 dry flyash pneumatic transfer systems and filter separators | CD-FS-4A^j CD-FS-4B^j CD-FS-4C^j | three bagfilters (727 square feet of filter area each) |
| 20 47 | ES-FA Silo 1 ES-FA Silo 2 ES-FA Silo 4 | three flyash conveying system storage and handling silos | CD-BF1, CD-BF2, CD-BF3, CD-BF4, CD-BF7, CD-BF8 | six bagfilters (2,450 square feet of filter area each) (two per silo) |
| 20 47 | ES-FA Silo 5 ^j | flyash conveying system storage and handling silo No. 5 | CD-BF9 ^j CD-BF10 ^j | two bagfilters (3,534 square feet of filter area each) |
| 24 47 | ES-S-1 | No. 1 flyash conveying system storage and handling silo and load-out stations | CD-WS1, CD-WS2 | five wet flyash conditioners (minimum ten percent by weight water injection rate) |
| 24 47 | ES-S-4 | No. 4 flyash conveying system storage and handling silo and load-out stations | CD-WS3, CD-WS4, CD-WS5 | |

| Page | Emission Source I.D. No. | Emission Source Description | Control Device I.D. No. | Control Device Description |
|----------|---|--|--|--|
| 24 40 | ES-S-5 ^j | No. 5 flyash conveying system storage and handling silo and load-out station | CD-WS6 ^j CD-WS7 ^j | two flyash mixer conditioners |
| 20 48 | ES-S-3L | electrostatic flyash separation system and mineral-rich product load-out silo | CD-BF23 | bagfilter (680 square feet of filter area) |
| 20 48 | ES-EFSS1 ES-EFSS2 | two electrostatic flyash separation systems and associated conveying systems | CD-BF24 | bagfilter (1,554 square feet of filter area) |
| 26 48 | ES-Coal Silo 1 ES-Coal Silo 2 ES-Coal Silo 3 ES-Coal Silo 4 ES-Coal Silo 5 ES-Coal Silo 6 NSPS | six coal storage silos | NA | NA |
| 20 49 | ES-SVS1 | stationary vacuum system for housekeeping | CD-BF26 | bagfilter (integral to vacuum system) |
| 20 49 | ES-FA Silo 3 | flyash conveying system storage and handling silo | CD-BF5 CD-BF6 | two bagfilters (2,450 square feet of filter area each) |
| 20 49 | ES-S-3L2 | mineral-rich flyash loadout system (28 tons per hour nominal filling rate and 300 tons per hour nominal unloading rate) | | |
| 26 49 | ES-37A, ES-37B, ES-39A, ES-39B NSPS | four coal conveyors (375 tons per hour nominal rated capacity each) | NA | NA |
| 27 49 | ES-Coal Hopper NSPS | coal unloading hopper (4,800 tons per hour nominal rated capacity) with wet suppression | NA | NA |
| 27 49 | ES-Coal Conv 1 NSPS | 925 feet long x 72 inches wide coal conveyor (4,800 tons per hour nominal rated capacity) | NA | NA |
| 27 49 | ES-Coal Conv 2 NSPS | 425 feet long x 72 inches wide coal conveyor (4,800 tons per hour nominal rated capacity) | NA | NA |
| 28 50 | ES-LS Rail | limestone rail unloading station (2,200 tons per hour nominal rated capacity) with wet suppression | NA | NA |
| 29 50 | ES-LS Unload A ES-LS Unload B NSPS | two limestone unloading hoppers | NA | NA |
| 29 50 | ES-LS Feeder 1 NSPS | 37 feet long x 72 inches wide belt feeder (2,200 tons per hour nominal rated capacity) with enclosed transfer | NA | NA |
| 29 50 | ES-LS Convey 2 NSPS | 471 feet long x 48 inches wide covered limestone conveyor (2,200 tons per hour nominal rated capacity) with telescopic chute for | NA | NA |

| Page | Emission Source I.D. No. | Emission Source Description | Control Device I.D. No. | Control Device Description |
|----------------|---|---|------------------------------|--|
| | | dust control while stockpiling | | |
| 29 50 | ES-LS Reclaim A ES-LS Reclaim B NSPS | two limestone reclaim hoppers located under limestone stockpile with enclosed transfer | NA | NA |
| 29 50 | ES-LS Feeder 3A ES-LS Feeder 3B NSPS | two 20 feet long x 36 inches wide belt feeders (480 tons per hour nominal rated capacity each) with enclosed transfer | NA | NA |
| 29 31 50 | ES-LS Convey 4A NSPS | 610 feet long x 30 inches wide covered limestone conveyor (480 tons per hour nominal rated capacity) with enclosed transfer and head-end dust collection | CD-LB-BF-1 | bagfilter (2,655 square feet of filter area) installed common to head-end transfer points of Conveyers 4A, 4B, 5, and 6, to tail-end transfer points of Conveyors 5, 6, 7, and to Limestone Silos A, B, and C |
| 29 31 50 | ES-LS Convey 4B NSPS | 610 feet long x 30 inches wide covered limestone conveyor (480 tons per hour nominal rated capacity) with enclosed transfer and head-end dust collection | CD-LB-BF-1 | bagfilter (2,655 square feet of filter area) installed common to head-end transfer points of Conveyers 4A, 4B, 5, and 6, to tail-end transfer points of Conveyors 5, 6, 7, and to Limestone Silos A, B, and C |
| 31 50 | ES-LS Convey 5 NSPS | 42 feet long x 30 inches wide limestone conveyor (480 tons per hour nominal rated capacity) that feeds Limestone Silo A and has enclosed transfer dust collection | CD-LB-BF-1 | bagfilter (2,655 square feet of filter area) installed common to head-end transfer points of Conveyers 4A, 4B, 5, and 6, to tail-end transfer points of Conveyors 5, 6, 7, and to Limestone Silos A, B, and C |
| 31 50 | ES-LS Convey 6 NSPS | 42 feet long x 30 inches wide limestone conveyor (480 tons per hour nominal rated capacity) that can feed either Limestone Silo C or Limestone Conveyor 7 and has enclosed transfer dust collection | CD-LB-BF-1 | bagfilter (2,655 square feet of filter area) installed common to head-end transfer points of Conveyers 4A, 4B, 5, and 6, to tail-end transfer points of Conveyors 5, 6, 7, and to Limestone Silos A, B, and C |
| 31 50 | ES-LS Convey 7 NSPS | 198 feet long x 30 inches wide limestone conveyor (480 tons per hour nominal rated capacity) that feeds the Mayo Limestone Silo and has enclosed transfer dust collection | CD-LB-BF-1 CD-LB-BF-2 | bagfilter (2,655 square feet of filter area) installed common to head-end transfer points of Conveyers 4A, 4B, 5, and 6, to tail-end transfer points of Conveyors 5, 6, 7, and to Limestone Silos A, B, and C bagfilter (641 square feet of filter area) installed common to Mayo Limestone Silo and head-end of Conveyor 7 |
| 31 51 | ES-LS Silo A ES-LS Silo B ES-LS Silo C NSPS | three limestone silos (572 tons/13,468 cubic feet storage capacity each) | CD-LB-BF-1 | bagfilter (2,655 square feet of filter area) installed common to head-end transfer points of Conveyers 4A, 4B, 5, and 6, to tail-end transfer points of Conveyors 5, 6, 7, and to Limestone Silos A, B, and C |

| Page | Emission Source I.D. No. | Emission Source Description | Control Device I.D. No. | Control Device Description |
|----------|--|--|-------------------------|---|
| 31 13 | ES-LS Mayo Silo NSPS | limestone silo storing material for Mayo plant (600 tons/14,117 cubic feet storage capacity) | CD-LB-BF-2 | bagfilter (641 square feet of filter area) installed common to Mayo Limestone Silo and head-end of Conveyor 7 |
| 31 51 | ES-Truck Spout NSPS | truck loading spout from Mayo Limestone Silo | CD-LB-BF-3 | bagfilter (480 square feet of filter area) |
| 29 51 | ES-LS Grinder 1 ES-LS Grinder 2 ES-LS Grinder 3 NSPS | three wet limestone grinders (50 tons per hour nominal rated limestone capacity) | NA | NA |
| 34 | ES-CBO-FBC NSPS | flyash-fired fluidized bed combustor (46.98 tons per hour flyash burn capacity) | CD-CBO-FBC-BF-1 | bagfilter (8,854 square feet of filter area) |
| 36 | ES-CBO Silo 1 | CBO feedash silo | CD-CBO-FS-BF-1 | bagfilter (1,685 square feet of filter area) |
| 36 | ES-CBO Silo 2 | CBO recycle ash silo | CD-CBO-RS-BF-1 | bagfilter (605 square feet of filter area) |
| 36 | ES-CBO Dome | CBO product dome | CD-CBO-PD-BF-1 | bagfilter (2,938 square feet of filter area) |
| 46 | ES-WWTBR | wastewater treatment bioreactor | NA | NA |
| 40 | ES-FWP2 NSPS MACT ZZZZ | one 175 HP diesel fired emergency fire water pump | NA | NA |
| 40 | ES-Sorb-1 | Sorbent Receiving Trailer | CD-BF-Sorb-1 | bagfilter (264 square feet of filter area) |
| 40 | ES-Sorb-2 | Sorbent Metering Trailer | | |
| 40 | ES-Sorb-3 | Pneumatic Equipment Trailer | NA | NA |
| 42 | ES-SORB-5 | stationary sorbent Silo 1 for Unit 4 | CD-SORB-5 | bagfilter (1.6:1 air-to-cloth ratio) |
| 42 | ES-SORB-6 | stationary sorbent Silo 2 for Unit 4 | CD-SORB-6 | bagfilter (1.6:1 air-to-cloth ratio) |
| 42 | ES-SORB-7 | Unit 4 Silo 1 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 42 | ES-SORB-8 | Unit 4 Silo 2 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 42 | ES-SORB-9 | stationary sorbent Silo 1 for Unit 3 | CD-SORB-9 | bagfilter (1.6:1 air-to-cloth ratio) |
| 42 | ES-SORB-10 | stationary sorbent Silo 2 for Unit 3 | CD-SORB-10 | bagfilter (1.6:1 air-to-cloth ratio) |
| 42 | ES-SORB-11 | Unit 3 Silo 1 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 42 | ES-SORB-12 | Unit 3 Silo 2 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 42 | ES-SORB-13 | stationary sorbent Silo 1 for Unit 2 | CD-SORB-13 | bagfilter (1.6:1 air-to-cloth ratio) |
| 42 | ES-SORB-14 | stationary sorbent Silo 2 for Unit 2 | CD-SORB-14 | bagfilter (1.6:1 air-to-cloth ratio) |

| Page | Emission Source I.D. No. | Emission Source Description | Control Device I.D. No. | Control Device Description |
|------|--------------------------------------|--|-------------------------|--------------------------------------|
| 42 | ES-SORB-15 | Unit 2 Silo 1 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 42 | ES-SORB-16 | Unit 2 Silo 2 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 42 | ES-SORB-17 | stationary sorbent Silo 1 for Unit 1 | CD-SORB-17 | bagfilter (1.6:1 air-to-cloth ratio) |
| 42 | ES-SORB-18 | stationary sorbent Silo 2 for Unit 1 | CD-SORB-18 | bagfilter (1.6:1 air-to-cloth ratio) |
| 42 | ES-SORB-19 | Unit 1 Silo 1 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 42 | ES-SORB-20 | Unit 1 Silo 2 pneumatic conveying equipment system (4000 pounds per hour maximum capacity) | NA | NA |
| 44 | ES-31 MACT ZZZZ | one No. 2 fuel oil-fired 287 hp emergency fire water pump diesel engine | NA | NA |
| 44 | ES-32A ES-32B MACT ZZZZ | two propane-fired 34 kW emergency generator spark ignition engines | NA | NA |

- a For ozone season NO_x control and compliance with the North Carolina Clean Smokestacks Act (SB 1078 - Air Quality/Electric Utilities Bill). Operated on an as needed basis.
- c For compliance with the North Carolina Clean Smokestacks Act (SB 1078 - Air Quality/Electric Utilities Bill) and the Phase II Acid Rain permit requirements. Operated on an as needed basis.
- h Alkaline-based fuel additive may be used on an as-needed basis not to exceed 4 pounds per ton of coal burned. Fuel additives shall not contain any toxic air pollutants listed in 15A NCAC 02Q .0711.
- i Temporary sorbent injection system ID No. CD-INJ-Sorb5 may be used as a backup to the permanent system on either Unit 1, 2, 3 or 4 as needed. This system was previously permitted on Unit 4 as ID No. CD-Sorb4.
- j These emission sources (ID Nos. ES-FA Handling 1, ES-FA Handling 3A, ES-FA Handling 3B, ES-FA Handling 3C, ES-FA Handling 4A, ES-FA Handling 4B, ES-FA Handling 4C, ES-FA Silo 5 and ES-S-5) and control devices (ID Nos. CD-BF14, CD-FS-1A, CD-FS-1B, CD-FS-3A, CD-FS-3B, CD-FS-3C, CD-FS-4A, CD-FS-4B, CD-FS-4C, CD-BF9, CD-BF10, CD-WS6 and CD-WS7) are listed as a 15A NCAC 02Q .0501(c)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.
- k Incidental spills of oil, antifreeze, etc. that might get on the coal from mobile equipment is allowed to be burned in these boilers.

SECTION 2- SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) listed below are subject to the following specific terms, conditions, and limitations, including the monitoring, recordkeeping, and reporting requirements specifically identified herein as applicable requirements:

A.

- coal/No. 2 fuel oil-fired electric utility boiler equipped with low-NO_x burner and Mg(OH)₂ fuel additive (ID No. ES-Unit 1) and associated selective catalytic reduction system (ID No. CD-SCR1) installed in series with electrostatic precipitator (ID Nos. CD-ESP1) and a wet scrubber (ID No. CD-FGD1), sorbent injection system (ID No. CD-INJ-Sorb1), and temporary sorbent injection system (ID No. CD-INJ-Sorb5)
- coal/No. 2 fuel oil-fired electric utility boiler equipped with low-NO_x burner, Mg(OH)₂ fuel additive (ID No. ES-Unit 2) and associated selective catalytic reduction system (ID No. CD-SCR2) installed in series with electrostatic precipitator (ID No. CD-ESP2) and a wet scrubber (ID No. CD-FGD2), and sorbent injection system (ID No. CD-INJ-Sorb2)
- two coal/No. 2 fuel oil-fired electric utility boilers equipped with low-NO_x burners, Mg(OH)₂ fuel additive (ID Nos. ES-Unit 3A and ES-Unit 3B) and associated selective catalytic reduction systems (ID Nos. CD-SCR3a and CD-SCR3b) installed in series with two electrostatic precipitators (ID Nos. CD-ESP3a and CD-ESP3b) and a wet scrubber (ID No. CD-FGD3), and sorbent injection system (ID No. CD-INJ-Sorb3)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---------------------|---|--|
| sulfur dioxide | 0.547 pounds per million Btu heat input | 15A NCAC 02D .0501(c) |
| | Phase II Acid Rain Permit Requirements (see Section 2.4) | 15A NCAC 02Q .0402 (40 CFR Part 72) |
| | (Federally Enforceable Only) Cross State Air Pollution Rule Requirements (see Section 2.2.B.) | 40 CFR Part 97, Subpart CCCCC |
| particulate matter | As determined by stack test: Unit 1 Boiler - 0.25 pounds per million Btu heat input Unit 2 Boiler - 0.16 pounds per million Btu heat input Unit 3A Boiler - 0.10 pounds per million Btu heat input Unit 3B Boiler - 0.10 pounds per million Btu heat input As determined by PM CEMS: 0.030 pounds per million Btu heat input (or 0.30 pounds per MWh) | 15A NCAC 02D .0536 |

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---|--|--|
| nitrogen oxides | when burning only coal 1.8 pounds per million Btu heat input when burning only oil or natural gas 0.8 pounds per million Btu heat input when burning both coal and oil or natural gas $E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$ where: E = emission limit for combined burning of coal and oil or gas in pounds per million Btu heat input Ec = 1.8 pounds per million Btu heat input for coal only Eo = 0.8 pounds per million Btu heat input for used oil or gas Qc = coal heat input in Btu per hour Qo = oil and gas heat input in Btu per hour Qt = Qc + Qo | 15A NCAC 02D .0519 |
| | 1.066 pounds per million Btu heat input or the limit above when burning oil whichever is lower | 15A NCAC 02D .0501(c) |
| | Phase II Acid Rain Permit Requirements (see Section 2.4) | 15A NCAC 02Q .0407 (40 CFR Part 72) |
| | (Federally Enforceable Only) Cross State Air Pollution Rule Requirements (see Section 2.2.B.) | 40 CFR Part 97, Subparts AAAAA and BBBBB |
| visible emissions | visible emissions shall not be more than 40 percent opacity when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. | 15A NCAC 02D .0521 |
| | State-only Requirement Unit 1 Boiler - 15 percent annual average opacity Unit 2 Boiler - 20 percent annual average opacity Unit 3A Boiler - 25 percent annual average opacity Unit 3B Boiler - 25 percent annual average opacity | 15A NCAC 02D .0536 |
| malfunction abatement plan | as defined in specific conditions | 15A NCAC 02D .0535 |
| excess emissions/ good operating and maintenance practices | as defined in specific conditions | 15A NCAC 02D .0606 |
| Hazardous Air Pollutants | See Section 2.2.B.2 | 15A NCAC 02D .1111 MACT (40 CFR 63, Subpart UUUUU) |

1. 15A NCAC 02D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS

- a. Emissions of nitrogen oxides from these sources when burning coal and/or oil shall be calculated by the following equation [15A NCAC 02D .0519]:

$$E = [(Ec)(Qc) + (Eo)(Qo)]/Qt \quad \text{where:}$$

E = emission limit for combined burning of coal and oil or gas in pounds per million Btu heat input
Ec = 1.8 pounds per million Btu heat input for coal only
Eo = 0.8 pounds per million Btu heat input for oil or gas
Qc = coal heat input in Btu per hour
Qo = oil and gas heat input in Btu per hour
Qt = Qc + Qo

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. The Permittee shall assure compliance with 15A NCAC 02D .0519 by determining nitrogen oxide emissions in pounds per million Btu using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). Compliance with this emission standard shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75.

For monitoring purposes, the following emission limits will apply:

- i. When only coal is burned, the emission limit shall be 1.8 pounds per million Btu heat input.
- ii. When only oil or gas is burned, the emission limit shall be 0.8 pounds per million Btu heat input.
- iii. When oil or gas is burned other than for startup and for periods greater than 24 hours, the emission limit shall be calculated in accordance with the equation in Section 2.1 A.1. a. above.

If any 24-hour block average exceeds the emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

- d. The Permittee shall maintain records of monthly coal and oil consumption (written or electronic form) and shall submit such records within 30 days of a request by DAQ. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519 if these records are not maintained.

Reporting [15A NCAC 02Q .508(f)]

- e. The Permittee shall submit the continuous emissions monitoring system data showing the 24-hour daily block values for periods of excess nitrogen oxide emissions no later than January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- f. **CEMs Monitor Availability** - The Permittee shall submit the nitrogen oxide CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

2. 15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS

- a. In addition to any control or manner of operation necessary to meet emission standards in 15A NCAC 02D .0500, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards of 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in 15A NCAC 02D .0500 are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls. [15A NCAC 02D .0501(c)]
- b. Emissions of sulfur dioxide from these sources shall not exceed **0.547 pounds per million Btu heat input** in accordance with the modeling analysis received May 16, 2007. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0501(c)]
- c. Emissions of nitrogen oxides from these sources shall not exceed either **1.066 pounds per million Btu heat input** (in accordance with the modeling analysis received May 16, 2007) or the limit in Section 2.1 A.1.a above when burning oil, whichever is lower. [15A NCAC 02D .0501(c)]

Testing [15A NCAC 02D .2601]

- d. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limits given in Sections 2.1 A.2.b or c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f) and 02D .0608]

- e. The Permittee shall assure compliance with 15A NCAC 02D .0501(c) by determining sulfur dioxide and nitrogen oxides emissions in pounds per million Btu using continuous emissions monitoring (CEM) systems meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). Compliance with sulfur dioxide and nitrogen oxides emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. If any 24-hour block average exceeds the limits given in Sections 2.1 A.2.b or c above or records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit the continuous emissions monitoring data showing the 24-hour daily block values in pounds per million Btu for each 24-hour daily block averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.
- g. CEMs Monitor Availability - The Permittee shall submit sulfur dioxide and nitrogen oxides CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions shall not be more than **40 percent opacity** when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 02D .0521(c)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601

and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. No opacity monitoring is required.

Reporting [15A NCAC 02Q .0508(f)]

- d. No opacity reporting is required.

4. 15A NCAC 02D .0535: EXCESS EMISSIONS REPORTING AND MALFUNCTIONS

- a. All electric utility boiler units shall have a malfunction abatement plan approved by the Director as specified in 15A NCAC 02D .0535(d). [15A NCAC 02D .0535]

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. The Permittee shall maintain logs to show that the operation and maintenance parts of the malfunction abatement plan are implemented. These logs (written or electronic form) shall be subject to inspection by DAQ personnel upon request during business hours. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0535 if these records are not maintained.

5. 15A NCAC 02D .0536: PARTICULATE EMISSIONS FROM ELECTRIC UTILITY BOILERS

- a. Emissions of particulate matter from these sources shall not exceed the following as determined by stack test: [15A NCAC 02D .0536(b)]
Unit 1 Boiler - 0.25 pounds per million Btu heat input
Unit 2 Boiler - 0.16 pounds per million Btu heat input
Unit 3A Boiler - 0.10 pounds per million Btu heat input
Unit 3B Boiler - 0.10 pounds per million Btu heat input
- b. Any use of the electrostatic precipitator high voltage control Energy Management System (EMS) feature requires a revision to this permit.

Testing [15A NCAC 02D .2601 and 15A NCAC 02D .0536]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1 A.5.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536.
- d. A stack test shall be conducted for particulate matter in accordance with either Method 5 at a sample temperature of $320^{\circ} \pm 25^{\circ}$ F as described in §63.10010(i)(1) or Method 5B of Appendix A of 40 CFR Part 60 once per calendar year. In the event that a boiler exceeds 80 percent of its particulate emission limit during the stack test, the Permittee shall schedule and conduct another stack test within 6 months. Upon demonstration that the source is operating under 80 percent of its particulate limit, as shown by three consecutive semiannual stack tests, the source may resume annual stack tests. If the result of any stack test is greater than the limits given in Section 2.1 A.5.a, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. Compliance with the particulate limit in Section 2.1.A.5.a shall be determined using the PM CEMS. A measured exceedance of 0.030 pounds per million Btu heat input (30-boiler operating day rolling average) or 0.30 pounds per MWh (30-boiler operating day rolling average) shall be a violation of the corresponding emission standards in Section 2.1.A.5.a.
- i. The Permittee shall install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS according to the applicable Maximum Achievable Control Technology (MACT) standards in §63.10010(i) of 40 CFR Part 63 Subpart UUUUU, as specified in Section 2.2.B.2.cc. The PM CEMS shall meet the requirements of Performance Specification PS-11 of Appendix B of 40 CFR Part 60. The Permittee shall have on file with the director an approved quality assurance program, and shall submit to the director within the time period of his request for his approval a revised quality assurance program to include the provisions of 40 CFR 60, Appendix F, Procedure 2 for the PM CEMS.
- ii. The PM emission rate shall be determined based on a 30-boiler operating day rolling average of the hourly arithmetic average emissions concentrations using the CEMS outlet data for each boiler

operating day (as defined below), except for data obtained during periods of startup or shutdown. Periods of malfunction shall be included in the emissions calculations.

A boiler operating day means a 24-hour period that begins at midnight and ends the following midnight during which any fuel is combusted at any time in the EGU, excluding startup periods or shutdown periods. It is not necessary for the fuel to be combusted the entire 24-hour period.

- iii. Data from the PM CEMS shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of 40 CFR Part 63 are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in §63.2. [§63.8(g)(2)]
- iv. PM CEMS monitor availability shall be calculated and reported.
- v. The Permittee shall record the output of the PM CEMS as specified in Section 2.2.B.2.ee.

If the results of the arithmetic 30-boiler operating day rolling average PM CEMS concentration exceeds the limit in this section or any of the above requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit excess emissions and monitoring system performance reports for PM in accordance with the reporting requirements given in Section 2.1.A.7.d no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. The compliance report shall include, at a minimum, the information required in 40 CFR 63.10 and contain the information specified in Section 2.2.B.2.ss, along with all 30-boiler operating day rolling average excess emissions (pounds per million Btu or pounds per MWh) using the CEMS outlet data, including periods exempted during periods of startup and shutdown.
- g. The results of any stack test shall be reported within 30 days, and the test report shall be submitted within 60 days after the test.
- h. All instances of deviations from the requirements of this permit must be clearly identified.

State-only Requirement

6. 15A NCAC 02D .0536: ANNUAL AVERAGE OPACITY FOR ELECTRIC UTILITY BOILERS

- a. Visible emissions from the utility boiler units shall not exceed the following: [15A NCAC 02D .0536(b)]

| <u>ID No.</u> | <u>Average Annual Opacity</u> |
|---------------|-------------------------------|
| ES-Unit 1 | 15 percent |
| ES-Unit 2 | 20 percent |
| ES-Unit 3A | 25 percent |
| ES-Unit 3B | 25 percent |

- b. The Permittee shall calculate each day an annual average opacity value for the most recent 365-day period ending with the end of the previous day. The average is the sum of the measured non-overlapping one-hour averages of opacity determined only while the unit is in operation divided by the number of such measured non-overlapping one-hour averages. Start-up, shut-down, and non-operating time shall not be included in the annual average opacity calculation, but malfunction time shall be included. The hourly opacity values shall be determined using the PM CEMS hourly average output values as follows:

$$\text{Opacity, average for each hour} = \frac{(\text{Actual PM CEMS Output, average for each hour})(Z, \text{Opacity})}{(Y, \text{mg} / \text{m}^3)}$$

where: Y = The average PM CEMS output value (mg/m³) established during the initial PM CEMS PS-11 certification procedure at or near, but no greater than, the AAO limit. A concurrent Method 9 test shall be conducted during the PM CEMS measurements to determine opacity. At least 60 minutes of PM CEMS and Method 9 data shall be averaged.

Z = The average concurrent Method 9 opacity readings obtained during the initial PM CEMS PS-11 certification procedure corresponding to the PM CEMS measurements for Y above.

Recordkeeping/Reporting [15A NCAC 02D .0536]

- c. The Permittee shall submit a report showing the calculated annual average opacity of each unit and the annual average opacity limit for each day during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.

7. 15A NCAC 02D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (CONTINUOUS OPACITY MONITORING, CONTINUOUS EMISSIONS MONITORING FOR SO₂, AND EXCESS EMISSIONS)

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- a. The alternative monitoring and recordkeeping procedure in this section (Section 2.1.A.7.a) applies as allowed by Paragraph 3.9 of Appendix P of 40 CFR Part 51. The Permittee shall install, certify, operate, and maintain a PM CEMS to monitor and record PM emissions according to the applicable Maximum Achievable Control Technology (MACT) standards in §63.10010(i) of 40 CFR Part 63 Subpart UUUUU, as specified in Section 2.2.B.2.dd.

The quarterly excess emissions (EE) reports shall be used as an indication of good operation and maintenance of the electrostatic precipitators. These sources shall be deemed to be properly operated and maintained if the percentage of time the PM emissions, calculated on a one-hour average, greater than 0.030 pounds per million Btu heat input* does not exceed 3.0 percent of the total operating time for any given calendar quarter, adjusted for monitor downtime (MD) as calculated below, except that Total Excess Emission Time contains all one-hour periods greater than 0.030 pounds per million Btu heat input*. In addition, these sources shall be deemed to be properly operated and maintained if the %MD does not exceed 2 percent for any given calendar quarter as calculated below.

* The PM monitored value subject to the 0.030 pounds per million Btu limit shall have a 5% CO₂ diluent cap, or a 14% O₂ diluent cap, substituted in the emission rate calculation whenever the actual CO₂ concentration is lower than 5% or whenever the actual O₂ concentration is higher than 14%.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE = \frac{\text{Total Excess Emission Time}^*}{\text{Total Source Operating Time}^{***} - \text{Monitor Downtime}} \times 100$$

Percent Monitor Downtime (%MD) Calculation for COMS:

$$\%MD = \frac{\text{Total Monitor Downtime}^{**}}{\text{Total Source Operating Time}^{***}} \times 100$$

- * Total Excess Emission Time contains any 6-minute period greater than 40% opacity including startup, shutdown, and malfunction.
- ** Total Monitor Downtime includes Quality Assurance (QA) activities unless exempted by regulation or defined in an agency approved QA Manual. The amount of exempt QA Time will be reported in the quarterly report as such.
- *** If a source operates less than 2200 hours during any quarter, the source may calculate the %EE and/or %MD using all operating data for the current quarter and the preceding quarters until 2200 hours of data are obtained. [N.C.G.S. 143-215.110]

- b. The Permittee shall use a continuous emissions monitoring system (CEMS) to monitor and record **sulfur dioxide emissions**. Continuous emissions monitoring and recordkeeping of sulfur dioxide emissions shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the flue gas desulfurization scrubbers. These sources shall be deemed to be properly operated and maintained if sulfur dioxide emissions do not exceed 0.547 pounds per million Btu calculated on a 24-hour basis. Compliance with the sulfur dioxide emission standard is determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values are summed, and the sum is divided by 24. A minimum of four data points, equally spaced, is required to determine a valid hour value unless the continuous emission monitoring system is installed to meet the provisions of 40 CFR Part 75. If a continuous emission monitoring system is installed to meet the provisions of 40 CFR Part 75, the minimum number of data points are determined by 40 CFR Part 75. In addition, the flue gas desulfurization scrubbers shall be deemed to be properly operated and maintained if the %MD does not exceed 2 percent for any given calendar quarter as calculated in Section 2.1.A.7.a above.

Reporting [15A NCAC 02Q .0508(f)]

- c. The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September as shown below. Reporting shall be in accordance with Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51.
 - i. Excess PM emissions are defined as any one-hour average greater than 0.03 pounds per million Btu heat input. The quarterly report shall include the number of hours each day and the percent of operating hours during the quarter with average PM emissions recorded by the PM CEMS greater than 0.030 pounds per million Btu.
 - ii. Excess sulfur dioxide emissions are defined as greater than 0.547 pounds per million Btu calculated on a 24-hour block average basis. Reporting shall be in accordance with Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51.
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

B. Two coal/No. 2 fuel oil-fired electric utility boilers equipped with low-NO_x burners, Mg(OH)₂ fuel additive (ID Nos. ES-Unit 4A and ES-Unit 4B) and associated selective catalytic reduction systems (ID Nos. CD-SCR4a and CD-SCR4b) installed in series with eight electrostatic precipitators (ID Nos. CD-ESP4a through CD-ESP4h), a wet scrubber (ID No. CD-FGD4), and sorbent injection system (ID No. CD-INJ-Sorb4)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|--------------------------|---|--|
| sulfur dioxide | varies - see Section 2.1 B.2.b | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart D) |
| | 0.547 pounds per million Btu heat input | 15A NCAC 02D .0501(c) |
| | Phase II Acid Rain Permit Requirements (see Section 2.4) | 15A NCAC 02Q .0402 (40 CFR Part 72) |
| | (Federally Enforceable Only) Cross State Air Pollution Rule Requirements (see Section 2.2.B.) | 40 CFR Part 97, Subpart CCCC |
| nitrogen oxides | varies - see Section 2.1 B.2.b | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart D) |
| | Phase II Acid Rain Permit Requirements (see Section 2.4) | 15A NCAC 02Q .0402 (40 CFR Part 72) |
| | (Federally Enforceable Only) Cross State Air Pollution Rule Requirements (see Section 2.2.B.) | 40 CFR Part 97, Subparts AAAAA and BBBBB |
| particulate matter | 0.03 pound per million Btu heat input | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart D) |
| Hazardous Air Pollutants | See Section 2.2.B.2 | 15A NCAC 02D .1111 MACT (40 CFR 63, Subpart UUUU) |

1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART D)

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart D, including Subpart A "General Provisions." [15A NCAC 02D .0524]
- b. The following emission limits shall not be exceeded [15A NCAC 02D .0524]:

| POLLUTANT | EMISSION LIMIT (pounds per million Btu) |
|--|---|
| sulfur dioxide | $\frac{y(0.80) + z(1.2)}{y + z}$ |
| nitrogen oxides (expressed as NO ₂) | $\frac{y(0.30) + z(0.70)}{y + z}$ |
| particulates | 0.03 |

y = percentage of total heat input derived from liquid fossil fuel
z = percentage of total heat input derived from solid fossil fuel

- c. Any use of the electrostatic precipitator high voltage control Energy Management System (EMS) feature requires a revision to this permit.
- Testing** [15A NCAC 02D .2601]
- d. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1.B.1.b above,

the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

- e. A stack test shall be conducted for particulate matter in accordance with either Method 5 at a sample temperature of $320^{\circ} \pm 25^{\circ}$ F as described in §63.10010(i)(1) or Method 5B of Appendix A of 40 CFR Part 60 once per calendar year. In the event that a boiler exceeds 80 percent of its particulate emission limit during the stack test, the Permittee shall schedule and conduct another stack test within 6 months. Upon demonstration that the source is operating under 80 percent of its particulate limit, as shown by three consecutive semiannual stack tests, the source may resume annual stack tests. If the result of any stack test is greater than the limit given in Section 2.1.B.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- f.
 - i. The Permittee shall install, maintain, and operate a PM CEMS.
 - ii. The Permittee shall install, maintain, and operate a CEMS for measuring sulfur dioxide emissions, nitrogen oxide emissions, and either oxygen or carbon dioxide, as per the requirements of 40 CFR Part 75.
- g. Compliance with SO₂ and NO_x emission limits of Section 2.1.B.1.b above, shall be determined by averaging hourly continuous emission monitoring system values over any three-hour (rolling) period. The three-hour average shall be the arithmetic average of three contiguous one-hour periods of sulfur dioxide or nitrogen oxides as measured by the continuous emission monitoring system. Missing data shall not be filled nor shall the data be bias adjusted in accordance with 40 CFR Part 75. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. If any three-hour average exceeds emission limits of Section 2.1.B.2.b above (except during periods of startup, shutdown and malfunction) or records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [40 CFR 60.8 and 60.45]
- h. Compliance with the particulate limit in Section 2.1.B.1.b shall be determined using the PM CEMS.
 - i. Each PM CEMS shall be installed, evaluated, operated, and maintained according to the requirements in §60.49Da(v). For affected facilities using a PM CEMS, a COMS is not required. [§60.45(b)(5)]
 - ii. When demonstrating compliance, the PM emission rate shall be determined based on a 24-hour daily (block) average of the hourly arithmetic average emissions concentrations using the CEMS outlet data each boiler operating day, except for data obtained during startup, shutdown, and malfunction. Averages are only calculated for boiler operating days that have valid data for at least 18 hours of unit operation during which the standard applies. Instead, all of the valid hourly emission rates of the operating day(s) not meeting the minimum 18 hours valid data daily average requirement are averaged with all of the valid hourly emission rates of the next boiler operating day with 18 hours or more of valid PM CEMS data to determine compliance. The 24-hour block arithmetic average emission concentration shall be calculated using EPA Reference Method 19 of Appendix A of 40 CFR Part 60, section 4.1.
 - iii. At a minimum, valid PM CEMS hourly averages shall be obtained for 75 percent of all operating hours on a 30-day rolling average basis. Beginning on January 1, 2012, valid PM CEMS hourly averages shall be obtained for 90 percent of all operating hours on a 30-day rolling average basis. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.
 - iv. The 1-hour arithmetic averages of PM CEMS data shall be expressed in pounds per million Btu and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of Subpart A of 40 CFR Part 60.
 - v. All valid PM CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph iii above are not met.
 - vi. When PM emissions data are not obtained because of PM CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the DAQ or EPA Reference Method 19 of Appendix A of 40 CFR Part 60 to provide, as necessary, valid emissions data for a minimum of 90 percent (only 75 percent is required prior to January 1, 2012) of all operating hours per 30-day rolling average.

If the results of the 24-hour daily arithmetic average PM CEMS concentration exceeds the limit in Section 2.1.B.1.b or any of the above requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Reporting [15A NCAC 02Q .0508(f)]

- i. The Permittee shall submit excess emissions and monitoring system performance reports for sulfur

dioxide, nitrogen oxide and PM. The reports shall be postmarked by the 30th day following the end of each calendar year quarter and shall include, at a minimum, the information required in 40 CFR 60.7(c), as follows:

- i. Sulfur Dioxide - Report all three-hour periods of **excess emissions** (pounds per million Btu) during the reporting period including periods exempted during startup, shutdown and malfunction. Monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period shall be included.
- ii. Nitrogen Oxides - Report all three-hour periods of **excess emissions** (pounds per million Btu) during the reporting period including periods exempted during startup, shutdown and malfunction. Monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period shall be included.
- iii. PM –
 - (A) Report all 24-hour daily (block) average **excess emissions** (pounds per million Btu) using the PM CEMS outlet data, including periods exempted during startup, shutdown, and malfunction;
 - (B) Within 15 days of a written request, report **all** PM CEMS hourly averages (in written or electronic form) to show, at a minimum, that valid PM CEMS hourly averages have been obtained for 90 percent (only 75 percent is required prior to January 1, 2012) of all operating hours on a 30-day rolling average basis; and
- j. The results of any stack test shall be reported within 30 days, and the test report shall be submitted within 60 days after the test.
- k. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS

- a. In addition to any control or manner of operation necessary to meet emission standards in 15A NCAC 02D .0500, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards of 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in 15A NCAC 02D .0500 are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls. [15A NCAC 02D .0501(c)]
- b. Emissions of sulfur dioxide from these sources shall not exceed **0.547 pounds per million Btu heat input** in accordance with the modeling analysis received May 16, 2007. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0501(c)]

Testing [15A NCAC 02D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1 B.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f) and 02D .0608]

- d. The Permittee shall assure compliance with 15A NCAC 02D .0501(c) by determining sulfur dioxide emissions in pounds per million Btu using continuous emissions monitoring (CEM) systems meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). Compliance with sulfur dioxide emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. If any 24-hour block average exceeds the limits given in Section 2.1 B.2.b above or records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the continuous emissions monitoring data showing the 24-hour daily block values in pounds per million Btu for each 24-hour daily block averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and

December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.

- f. CEMs Monitor Availability - The Permittee shall submit sulfur dioxide and nitrogen oxides CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

C.

- **Unit 1 dry flyash pneumatic transfer system including surge bin and filter separators (ID No. ES-FA Handling 1*) and associated bagfilters (ID Nos. CD-BF14, CD-FS-1A* and CD-FS-1B*)**
- **Unit 3 dry flyash pneumatic transfer systems and filter separators (ID Nos. ES-FA Handling 3A*, ES-FA Handling 3B* and ES-FA Handling 3C*), and associated bagfilters ID Nos. CD-FS-3A*, CD-FS-3B* and CD-FS-3C*)**
- **Unit 4 dry flyash pneumatic transfer systems and filter separators (ID Nos. ES-FA Handling 4A*, ES-FA Handling 4B* and ES-FA Handling 4C*), and associated bagfilters CD-FS-4A*, CD-FS-4B* and CD-FS-4C*)**
- **three flyash conveying system storage and handling silos (ID Nos. ES-FA Silo 1, ES-FA Silo 2, and ES-FA Silo 4), and associated bagfilters (ID Nos. CD-BF1, CD-BF2, CD-BF3, CD-BF4, CD-BF7, and CD-BF8)**
- **one flyash conveying system storage and handling silo (ID No. ES-FA Silo 5*) and associated bagfilters (ID Nos. CD-BF9* and CD-BF10*)**
- **electrostatic flyash separation system consisting of one mineral-rich product load-out silo (ID No. ES-S-3L) and two electrostatic flyash separation and conveying systems (ID Nos. ES-EFSS1 and ES-EFSS2), and associated bagfilters (ID Nos. CD-BF23 and CD-BF24)**
- **stationary vacuum system for housekeeping (ID No. ES-SVS1) and integral bagfilter (ID No. CD-BF26)**
- **flyash conveying system storage and handling silo (ID No. ES-FA Silo 3) and one mineral-rich flyash loadout system (ID No. ES-S-3L2), and associated bagfilters (ID Nos. CD-BF5 and CD-BF6)**

* **CONDITIONS FOR THIS EQUIPMENT ARE NOT SHIELDED PURSUANT TO 15A NCAC 02Q .0512(a).**

Note: Operation of each existing Units 1, 3 and 4 dry flyash conveying system may continue until new systems are fully operational.

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------|---|-----------------------|
| particulate matter | $E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour | 15A NCAC 02D .0515 |
| visible emissions | 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period | 15A NCAC 02D .0521 |
| toxic air pollutants | See Section 2.2.A.1 State-only requirement | 15A NCAC 02D .1100 |

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the Unit 1 dry fly ash pneumatic transfer system including surge bin and filter separators (ID No. ES-FA Handling 1), Unit 3 dry fly ash pneumatic transfer systems and filter separators (ID Nos. ES-FA Handling 3A, ES-FA Handling 3B and ES-FA Handling 3C), Unit 4 dry fly ash pneumatic transfer systems and filter separators (ID Nos. ES-FA Handling 4A, ES-FA Handling 4B and ES-FA Handling 4C), three flyash conveying system storage and handling silos (ID Nos. ES-FA Silo 1, ES-FA Silo 2, and ES-FA Silo 4), one flyash conveying system storage and handling silo (ID No. ES-FA Silo 5), one electrostatic flyash separation system consisting of one mineral-rich product load-out silo (ID No. ES-S-3L) and two electrostatic flyash separation and conveying systems (ID No. ES-EFSS1 and ES-EFSS2), one stationary vacuum system for housekeeping (ID Nos. ES-SVS1), one flyash conveying system storage and handling silo (ID No. ES-FA Silo 3), and one mineral-rich flyash loadout system (ID No. ES-S-3L2) shall be controlled by the bagfilters (ID Nos. CD-BF14, CD-FS-1A, CD-FS-1B, CD-FS-3A, CD-FS-3B, CD-FS-3C, CD-FS-4A, CD-FS-4B, CD-FS-4C, CD-BF9, CD-BF10, CD-BF1 through CD-BF8, CD-BF23, CD-BF24 and CD-BF26). To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
- a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.
- Reporting** [15A NCAC 02Q .0508(f)]
- e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The Permittee shall establish "normal" for these sources (ID Nos. ES-FA Handling 1, ES-FA Handling 3A, ES-FA Handling 3B, ES-FA Handling 3C, ES-FA Handling 4A, ES-FA Handling 4B, ES-FA Handling 4C and ES-FA Silo 5) within 30 days of commencement of operation of new or modified equipment or within 30 days of permit issuance for any sources that commenced operation prior to issuance of Permit No. 01001T52. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 C.2.a. above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

- a. For completion of the two-step significant modification process pursuant to 15A NCAC 02Q .0501(c)(2) or (d)(2), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of these sources (ID Nos. ES-FA Handling 1, ES-FA Handling 3A, ES-FA Handling 3B, ES-FA Handling 3C, ES-FA Handling 4A, ES-FA Handling 4B, ES-FA Handling 4C and ES-FA Silo 5) and associated air pollution control devices (ID Nos. CD-FS-1A, CD-FS-1B, CD-FS-3A, CD-FS-3B, CD-FS-3C, CD-FS-4A, CD-FS-4B, CD-FS-4C, CD-BF9 and CD-BF10).

Reporting [15A NCAC 02Q .0508(f)]

- b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of these sources (ID Nos. ID Nos. ES-FA Handling 1, ES-FA Handling 3A, ES-FA Handling 3B, ES-FA Handling 3C, ES-FA Handling 4A, ES-FA Handling 4B, ES-FA Handling 4C and ES-FA Silo 5) and associated air pollution control devices (ID Nos. CD-FS-1A, CD-FS-1B, CD-FS-3A, CD-FS-3B, CD-FS-3C, CD-FS-4A, CD-FS-4B, CD-FS-4C, CD-BF9 and CD-BF10), postmarked no later than 30 days after such date.

D.

- **No. 1 flyash conveying system storage and handling silo, and load-out stations (ID No. ES-S-1) and associated wet flyash conditioners (ID Nos. CD-WS1 and CD-WS2)**
- **No. 4 flyash conveying system storage and handling silo, and load-out stations (ID No. ES-S-4) and associated wet flyash conditioners (ID Nos. CD-WS3, CD-WS4 and CD-WS5)**
- **No. 5 flyash conveying system storage and handling silo, and load-out station (ID No. ES-S-5*) and associated flyash mixer conditioners (ID Nos. CD-WS6* and CD-WS7*)**

* **CONDITIONS FOR THIS EQUIPMENT ARE NOT SHIELDED PURSUANT TO 15A NCAC 02Q .0512(a).**

Note: Operation of the No. 5 flyash conveying system may continue until the new system is fully operational.

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------------|---|------------------------------|
| particulate matter | $E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour | 15A NCAC 02D .0515 |
| visible emissions | 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period | 15A NCAC 02D .0521 |
| toxic air pollutants | See Section 2.2.A.1 State-only requirement | 15A NCAC 02D .1100 |

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 D. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for emissions from these sources.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The Permittee shall establish “normal” for this source (ID No. ES-S-5) within 30 days of commencement of operation of new or modified equipment or within 30 days of permit issuance for any sources that commenced operation prior to issuance of Permit No. 01001T52. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 D.2.a above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

- a. For completion of the two-step significant modification process pursuant to 15A NCAC 02Q .0501(c)(2) or (d)(2), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of this source (ID No. ES-S-5) and associated air pollution control devices (ID Nos. CD-WS6 and CD-WS7).

Reporting [15A NCAC 02Q .0508(f)]

- b. The Permittee shall notify the Regional Office in writing of the date of beginning operation of this source (ID No. ID No. ES-S-5) and associated air pollution control devices (ID Nos. CD-WS6 and CD-WS7), postmarked no later than 30 days after such date.

E.

- **Six coal storage silos (ID Nos. ES-Coal Silo 1 through ES-Coal Silo 6)**
- **Four coal conveyors (ID Nos. ES-37A, ES-37B, ES-39A, and ES-39B)**

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------|---|--|
| particulate matter | $E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour | 15A NCAC 02D .0515 |
| visible emissions | 20 percent opacity except during periods of startup, shutdown and malfunction | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart Y) |
| toxic air pollutants | See Section 2.2.A.1 State-only requirement | 15A NCAC 02D .1100 |

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. The Permittee shall maintain production records and shall make these records available to a DAQ authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the production records are not maintained.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Y)

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Y, including Subpart A "General Provisions." [15A NCAC 02D .0524]
- b. On or after the date on which the performance test required to be conducted under 40 CFR 60.8 is completed, visible emissions shall not be 20 percent opacity or greater except during periods of startup, shutdown and malfunction.

Testing [15A NCAC 02D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E. 2. b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring [15A NCAC 02Q .0508(f)]

- d. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0524 or (c) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 E. 2. b. above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524.

Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- the date and time of each recorded action;
 - the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

F. coal unloading hopper (ID No. ES-Coal Hopper) with wet suppression and two coal conveyors (ID Nos. ES-Coal Convey 1 and ES-Coal Convey 2)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------|---|--|
| visible emissions | 20 percent opacity | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart Y) |
| toxic air pollutants | See Section 2.2.A.1 State-only requirement | 15A NCAC 02D .1100 |

**1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
(40 CFR PART 60 SUBPART Y)**

- The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Y, including Subpart A "General Provisions." [15A NCAC 02D .0524]
- On or after the date on which the performance test required to be conducted under 40 CFR 60.8 is completed, visible emissions shall not be **20 percent opacity** or greater.
- No monitoring/recordkeeping/reporting is required for emissions from these sources.

G. limestone rail unloading station (ID No. LS Rail) with wet suppression

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------|---|-----------------------|
| particulate matter | ambient air quality standards | 15A NCAC 02D .0510 |
| visible emissions | 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period | 15A NCAC 02D .0521 |
| toxic air pollutants | See Section 2.2.A.1 State-only requirement | 15A NCAC 02D .1100 |

1. 15A NCAC 02D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS

- a. The Permittee shall not cause, allow, or permit any material to be produced, handled, transported or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM10 and total suspended particulates.

- b. Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.

- c. The Permittee shall control emissions from conveyors, screens, and transfer points, such that the applicable opacity standards in Sections 2.1 G.2.a below are not exceeded.

Testing [15A NCAC 02D .2601]

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 G.2 below, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510.

Monitoring [15A NCAC 02Q .0508(f)]

- e. The monitoring required in Section 2.1 G.2.c below shall satisfy this requirement.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following start-up of the sources. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 G.2.a above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

- i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

H. Limestone Handling Equipment with Fugitive Emissions:

Two limestone unloading hoppers (ID Nos. ES-LS Unload A and ES-LS Unload B), three limestone belt feeders (ID Nos. ES-LS Feeder 1, ES-LS Feeder 3A, and ES-LS Feeder 3B), two limestone reclaim hoppers (ID Nos. ES-LS Reclaim A and ES-LS Reclaim B), three limestone conveyors (ID Nos. ES-LS Convey 2, ES-LS Convey 4A [tail-end transfer only], and ES-LS Convey 4B [tail-end transfer only]), and three wet limestone grinders (ID Nos. ES-LS Grinder 1, ES-LS Grinder 2, and ES-LS Grinder 3)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------|---|--|
| particulate matter | ambient air quality standards | 15A NCAC 02D .0510 |
| visible emissions | 10 percent opacity | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart OOO) |
| toxic air pollutants | See Section 2.2.A.1 State-only requirement | 15A NCAC 02D .1100 |

1. 15A NCAC 02D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS

- a. The Permittee shall not cause, allow, or permit any material to be produced, handled, transported or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM10 and total suspended particulates.
- b. Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.
- c. The Permittee shall control emissions from conveyors, screens, and transfer points, such that the applicable opacity standard in Section 2.1 H.2.b below is not exceeded.

Testing [15A NCAC 02D .2601]

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.2.b below, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510.

Monitoring [15A NCAC 02Q .0508(f)]

- e. The monitoring required in Section 2.1 I.2.d below shall satisfy this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0510 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 H.2.b below. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0510.

**2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
(40 CFR PART 60 SUBPART OOO)**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart OOO, including Subpart A "General Provisions." [15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524]

- b. Fugitive visible emissions from these sources shall not be more than 10 percent opacity.

Testing [15A NCAC 02D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring [15A NCAC 02Q .0508(f)]

- d. To assure compliance, once a month the Permittee shall observe the emission sources for any visible emissions above normal. The Permittee shall establish "normal" for the sources in the first 30 days following completion of the initial performance test. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0524 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 H.2.b above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524.

Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
- i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- f. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

I. Limestone Handling Equipment with Stack Emissions:

Five limestone conveyors (ID Nos. ES-LS Convey 4A [head-end transfer only], ES-LS Convey 4B [head-end transfer only], ES-LS Convey 5, ES-LS Convey 6, and ES-LS Convey 7), and three limestone silos (ID Nos. ES-LS Silo A, ES-LS Silo B, and ES-LS Silo C) with associated bagfilter (ID No. CD-LB-BF-1), one limestone silo (ID No. ES-LS Mayo Silo) with associated bagfilter (ID No. CD-LB-BF-2), and one truck loading spout (ID No. ES-Truck Spout) with associated bagfilter (ID No. CD-LB-BF-3)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------|---|--|
| particulate matter | ambient air quality standards | 15A NCAC 02D .0510 |
| | 0.022 gr/dscf | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart OOO) |
| visible emissions | 7 percent opacity | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart OOO) |
| toxic air pollutants | See Section 2.2.A.1 State-only requirement | 15A NCAC 02D .1100 |

1. 15A NCAC 02D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS

- a. The Permittee shall not cause, allow, or permit any material to be produced, handled, transported or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM10 and total suspended particulates.
- b. Fugitive non-process dust emissions shall be controlled by 15A NCAC 02D .0540.
- c. The Permittee shall control emissions from conveyors, screens, and transfer points, such that the applicable opacity standard in Section 2.1 I.2.c below is not exceeded.

Testing [15A NCAC 02D .2601]

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 I.2.b or c below, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510.

Monitoring [15A NCAC 02Q .0508(f)]

- e. The monitoring required in Section 2.1 J.2.e and f below shall satisfy this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510 if the ductwork and bagfilters are not inspected and maintained. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0510 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 I.2.c below. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0510.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART OOO)

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart OOO, including Subpart A "General Provisions." [15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524]

- b. Emissions of particulate matter from these sources shall not exceed 0.022 grains per standard dry cubic foot.
- c. Visible emissions from these sources shall not be more than 7 percent opacity.

Testing [15A NCAC 02D .2601]

- d. As required by 15A NCAC 02D .0524, the following performance tests shall be conducted, as specified in 40 CFR 60.675:

| Affected Facility | Pollutant | Test Method |
|---|--------------------|---------------------------|
| limestone conveyor (ID No. ES-LS Convey 7) with associated bagfilter (ID No. CD-LB-BF-1) | particulate matter | Method 5 or Method 17 |
| | visible emissions | Method 9 and 40 CFR 60.11 |
| limestone silo (ID No. ES-LS Mayo Silo) with associated bagfilter (ID No. CD-LB-BF-2) | | |
| truck loading spout (ID No. ES-Truck Spout) with associated bagfilter (ID No. CD-LB-BF-3) | | |

- i. At least 45 days prior to performing any required emissions testing, the Permittee must submit a testing protocol to the Regional Supervisor, DAQ for review and approval. All testing protocols must be approved by the DAQ prior to performing such tests.
 - ii. All performance tests shall be conducted in accordance with EPA Reference Methods, contained in 40 CFR 60, Appendix A.
 - iii. The EPA Administrator retains the exclusive right to approve equivalent and alternative test methods, continuous monitoring procedures, and reporting requirements.
 - iv. To afford the Regional Supervisor, DAQ, the opportunity to have an observer present, the Permittee shall provide the Regional Office in writing, at least fifteen (15) days' notice of any required performance test(s).
 - v. Within (60) days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after the initial start-up of the affected facility, the Permittee shall conduct the required performance test(s) and submit a written report of the test(s) to the Regional Supervisor, DAQ.
 - vi. This permit may be revoked, with proper notice to the Permittee, or enforcement procedures initiated, if the results of the test(s) indicate that the facility does not meet applicable limitations.
 - vii. The source shall be responsible for ensuring, within the limits of practicality, that the equipment or process being tested is operated at or near its maximum normal production rate or at a lesser rate if specified by the Director or his delegate.
 - viii. All associated testing costs are the responsibility of the Permittee.
- e. If additional emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1 I.2.b or c above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring [15A NCAC 02Q .0508(f)]

- f. Particulate matter emissions from the five limestone conveyors (ID Nos. ES-LS Convey 4A [head-end transfer only], ES-LS Convey 4B [head-end transfer only], ES-LS Convey 5, ES-LS Convey 6, and ES-LS Convey 7), four limestone bins silos (ID Nos. ES-LS Silo A, ES-LS Silo B, ES-LS Silo C, and ES-LS Mayo Silo), and one truck loading spout (ID No. ES-Truck Spout) shall be controlled by the bagfilters (ID No. CD-LB-BF-1, CD-LB-BF-2, and CD-LB-BF-3). To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual internal inspection of the bagfilter's structural integrity.
 The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the ductwork and bagfilters are not inspected and maintained.

- g. To assure compliance, once a month the Permittee shall observe the emission sources for any visible emissions above normal. The Permittee shall establish “normal” for the sources in the first 30 days following completion of the initial performance test. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0524 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 I.2.c above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524.

Recordkeeping [15A NCAC 02Q .0508(f)]

- h. The results of inspection and maintenance in Section 2.1 I.2.f above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilters; and
 - iv. any variance from manufacturer’s recommendations, if any, and corrections made.
- i. The results of the monitoring in Section 2.1 I.2.f above shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.
- j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- k. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- l. In addition to any other notification requirements to the Environmental Protection Agency (EPA), for the limestone conveyor (ID No. ES-LS Convey 7) with associated bagfilter (ID No. CD-LB-BF-1), limestone silo (ID No. ES-LS Mayo Silo) with associated bagfilter (ID No. CD-LB-BF-2); and truck loading spout (ID No. ES-Truck Spout) with associated bagfilter (ID No. CD-LB-BF-3), the Permittee is required to **NOTIFY** the Regional Supervisor, DAQ, in **WRITING**, of the following:
 - i. the date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected facility is commenced, postmarked no later than 30 days after such date; and
 - ii. the actual date of initial start-up of an affected facility, postmarked within 15 days after such date.

J. flyash-fired fluidized bed combustor (ID No. ES-CBO-FBC) with associated bagfilter (ID No. CD-CBO-FBC-BF-1)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|--|--|---|
| particulate matter | 0.10 pounds per million Btu heat input | 15A NCAC 02D .0503 |
| sulfur dioxide nitrogen oxides particulate matter visible emissions | as defined in specific conditions | 15A NCAC 02D .0524 (40 CFR Part 60 Subpart Db) |
| sulfur dioxide nitrogen oxides | as defined in specific conditions | 15A NCAC 02Q .0317 (PSD avoidance) |

1. 15A NCAC 02D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of flyash, that are discharged from this source into the atmosphere shall not exceed **0.10 pound per million Btu heat input each**. [15A NCAC 02D .0503 (a)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 J.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the fluidized bed combustor shall be controlled by the bagfilter. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
- an annual internal inspection of the bagfilters' structural integrity; and
 - a monthly visual inspection of the system ductwork, and material collection unit for leaks.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503 if the ductwork and bagfilter are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a log book (written or electronic form) on site and made available to an authorized representative upon request. The log book shall record the following:
- the date and time of actions recorded;
 - the results of each inspection;
 - the results of any maintenance performed on the bagfilter; and
 - any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period.
- g. All instances of deviations from the requirements of this permit must be clearly identified.

**2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
(40 CFR PART 60 SUBPART Db)**

The Permittee shall comply with all applicable provisions, including applicable emission standards, notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 as promulgated in 40 CFR 60, Subpart Db "Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units", including Subpart A "General Provisions." [15A NCAC 02D .0524]

Reporting [15A NCAC 02Q .0508(f)]

- a. In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to **NOTIFY** the Regional Supervisor, DAQ, in **WRITING**, of the following:
 - i. the date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected facility is commenced, postmarked no later than thirty (30) days after such date;
 - ii. the actual date of initial start-up of an affected facility, postmarked within fifteen (15) days after such date.

**3. 15A NCAC 02Q .0317: AVOIDANCE CONDITION
for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION**

- a. In order to avoid applicability of 15A NCAC 02D .0530 (g) for major sources and major modifications, total emissions of nitrogen oxides discharged into the atmosphere from the boilers (Units 1 through 4) shall not exceed 21,940 tons per consecutive 12-month period and total emissions of sulfur dioxide discharged into the atmosphere from the boilers (Units 1 through 4) shall not exceed 104,288 tons per consecutive 12-month period as a result of the carbon burnout modification.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- b. The monthly emissions of nitrogen oxides and sulfur dioxide from the boilers (Units 1 through 4) shall be monitored using the existing continuous emissions monitoring (CEM) systems meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). If the emissions are not monitored or emissions exceed the above limits, the Permittee shall be deemed to be in violation of 15A NCAC 02D .0530.

Reporting [15A NCAC 02Q .0508(f)]

- c. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly nitrogen oxides and sulfur dioxide emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months. All instances of deviations from the requirements of this permit must be clearly identified.

K.

- **CBO feedash silo (ID No. ES-CBO Silo 1*) and associated bagfilter (ID No. CD-CBO-FS-BF-1*),**
- **CBO recycle ash silo (ID No. ES-CBO Silo 2*) and associated bagfilter (ID No. CD-CBO-RS-BF-1*), and**
- **CBO product dome (ID No. ES-CBO Dome*) and associated bagfilter (ID No. CD-CBO-PD-BF-1*)**

State-only Requirement

- * **NOTIFICATION REQUIREMENT** - Within 15 days after start up of the new or modified facilities, the Permittee shall provide written notice of the start up to the Regional Supervisor, DAQ.

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---------------------|---|-----------------------|
| particulate matter | $E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour | 15A NCAC 02D .0515 |
| visible emissions | 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period | 15A NCAC 02D .0521 |

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from these sources shall be controlled by the bagfilters. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
- i. an annual internal inspection of the bagfilters' structural integrity; and
 - ii. a monthly visual inspection of the system ductwork, and material collection unit for leaks.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and

bagfilter are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a log book (written or electronic form) on site and made available to an authorized representative upon request. The log book shall record the following:
 - i. the date and time of actions recorded;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilter; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following start-up of the sources. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 K.2.a above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

L. One diesel fired emergency fire water pump (ID No. ES-FWP2)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------------------|---|--|
| sulfur dioxide | ≤ 15 ppm sulfur | 15A NCAC 02D .0524 [40 CFR 60 Subpart IIII] |
| visible emissions | 20 percent opacity except during start-up, shutdown and malfunction | 15A NCAC 02D .0521 |
| NMHC+NO _x CO PM | 10.5 g/kW-hr (7.8 g/HP-hr) 3.5 g/kW-hr (2.6 g/HP-hr) 0.54 g/kW-hr (0.4 g/HP-hr) | 15A NCAC 02D .0524 [40 CFR 60 Subpart IIII] |
| HAPs | as defined in specific conditions | 15A NCAC 02D .1111 MACT 40 CFR 63 Subpart ZZZZ |

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (ID No. FWP2) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521 (d)]

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 L.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring / recordkeeping / reporting is required for visible emissions from the burning of diesel fuel in this source.

**2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS
[40 CFR 60 SUBPART IIII]**

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart IIII, including Subpart A "General Provisions." [15A NCAC 02D .0524]

Emission Standards

- b. The Permittee shall comply with the following emission standards for stationary CI ICE of emergency fire water pump (ID No. FWP2) for model year 2008 and earlier:

NMHC and NO_x (combined): 10.5 g/kW-hr (7.8 g/HP-hr)
CO: 3.5 g/kW-hr (2.6 g/HP-hr)
PM: 0.54 g/kW-hr (0.4 g/HP-hr)

[§60.4205(c)]

- c. The Permittee shall use diesel fuel in the CI ICE of the emergency fire water pump (ID No. ES-FWP2) with a maximum sulfur content of 15 ppm. [§60.4207(b), and §80.510(b)]

Testing [15A NCAC 02Q .2601]

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 L. 2. b. above, the Permittee shall be

deemed in noncompliance with 15A NCAC 02D .0524.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- e. The Permittee shall operate and maintain the CI ICE of the emergency fire water pump (ID No. FWP2) over the entire life of the engine according to the manufacturer's written instructions or procedures, which are approved by the engine manufacturer. If the manufacturer's written instructions or procedures as approved by the engine manufacturer are not complied, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [§60.4206]
- f. The CI ICE of the emergency fire water pump (ID No. FWP2) shall be equipped with a non-resettable hour meter prior to startup. If the CI ICE of the emergency fire water pump (ID No. FWP2) is not equipped with a non-resettable hour meter prior to startup, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524. [§60.4209(a)]
- g. The Permittee shall operate and maintain the CI ICE of the emergency fire water pump (ID No. FWP2) in accordance with the manufacturers written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee may only change engine settings that are permitted by the manufacturer. The Permittee shall also meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in this Section 2.1 L.2.g. are not complied with. [§60.4211(a)]
- h. The Permittee shall purchase the CI ICE of the emergency fire water pump (ID No. FWP2) for the model year 2008 and earlier, capable of meeting the emission standards in Section 2.1 L.2.b. above. The Permittee shall demonstrate compliance with the emission standards in Section 2.1 L.2.b. above according to one of the methods specified in §60.4211(b)(1) through (5). The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in this Section 2.1 L.3.h. are not complied with or one of the chosen methods in §60.4211(b)(1) through (5) demonstrate that the emission standards in Section 2.1 L.2.b. above are exceeded. [§60.4211(b)]
- i. The Permittee may operate the CI ICE of the emergency fire water pump (ID No. FWP2) or maintenance checks and readiness testing for up to 100 hours per year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Operation during an actual emergency shall not be subject to a limit on hours. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Because the Permittee is required to comply with emission standards under §60.4205 for CI ICE of the emergency fire water pump (ID No. FWP2) and not under §60.4204, any operation other than emergency operation, and maintenance and testing as allowed in §60.4211 is prohibited. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524, if the requirements in this Section 2.1 L.2.i. are not complied with. [§60.4211(f)]

Reporting [15A NCAC 02Q .0508(f)]

- j. No initial notifications under §60.7(a)(1) and (3) are required for CI ICE of the emergency fire water pump (ID No. FWP2). [§60.4214(b)]
- k. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ)

- a. For the emergency firewater pump (ID No. ES-FWP2), the Permittee shall comply with the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII as specified in Section 2.1.L.2 above. No further requirements apply under 40 CFR 63, Subpart ZZZZ.

M. Sorbent Receiving Trailer (ID No. ES-Sorb-1) and Sorbent Metering Trailer (ID No. ES-Sorb-2) and associated bagfilter (ID No. CD-BF-Sorb-1), and Pneumatic Equipment Trailer (ID No. ES-Sorb-3)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---------------------|---|-----------------------|
| particulate matter | $E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour | 15A NCAC 02D .0515 |
| visible emissions | 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period | 15A NCAC 02D .0521 |

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.M.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from these sources shall be controlled by the bagfilter. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
- an annual internal inspection of the bagfilters' structural integrity; and
 - a monthly visual inspection of the system ductwork, and material collection unit for leaks.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilter are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a log book (written or electronic form) on site and made available to an authorized representative upon request. The log book shall record the following:
- the date and time of actions recorded;
 - the results of each inspection;
 - the results of any maintenance performed on the bagfilter; and
 - any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following start-up of the sources. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 M.2.a above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

N.

- stationary sorbent Silo 1 for Unit 4 (ID No. ES-SORB-5) and associated bagfilter (ID No. CD-SORB-5), stationary sorbent Silo 2 for Unit 4 (ID No. ES-SORB-6) and associated bagfilter (ID No. CD-SORB-6), Unit 4 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-7), and Unit 4 Silo 2 pneumatic conveying equipment system (ID No. ES-SORB-8)
- stationary sorbent Silo 1 for Unit 3 (ID No. ES-SORB-9) and associated bagfilter (ID No. CD-SORB-9), stationary sorbent Silo 2 for Unit 3 (ID No. ES-SORB-10) and associated bagfilter (ID No. CD-SORB-10), Unit 3 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-11), and Unit 3 Silo 2 pneumatic conveying equipment system (ID No. ES-SORB-12)
- stationary sorbent Silo 1 for Unit 2 (ID No. ES-SORB-13) and associated bagfilter (ID No. CD-SORB-13), stationary sorbent Silo 2 for Unit 2 (ID No. ES-SORB-14) and associated bagfilter (ID No. CD-SORB-14), Unit 2 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-15), and Unit 2 Silo 2 pneumatic conveying equipment system (ID No. ES-SORB-16)
- stationary sorbent Silo 1 for Unit 1 (ID No. ES-SORB-17) and associated bagfilter (ID No. CD-SORB-17), stationary sorbent Silo 2 for Unit 1 (ID Nos. ES-SORB-18) and associated bagfilter (ID No. CD-SORB-18), Unit 1 Silo 1 pneumatic conveying equipment system (ID No. ES-SORB-19), and Unit 1 Silo 2 pneumatic conveying equipment system (ID No. ES-SORB-20)

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---------------------|---|-----------------------|
| particulate matter | $E = 4.10 \times P^{0.67}$ for $P \leq 30$ tons/hr, or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ tons/hr where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour | 15A NCAC 02D .0515 |
| visible emissions | 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period | 15A NCAC 02D .0521 |

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If

the results of this test are above the limit given in Section 2.1.N.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from these sources shall be controlled by the bagfilters. To ensure that optimum control efficiency is maintained, the Permittee shall perform inspections and maintenance as recommended by the manufacturer implemented in the plant's Work Management System. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include the following:
 - i. an annual internal inspection of the bagfilters' structural integrity; and
 - ii. a monthly visual inspection of the system ductwork, and material collection unit for leaks.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilter are not inspected and maintained.
- d. The results of inspection and maintenance shall be maintained in a log book (written or electronic form) on site and made available to an authorized representative upon request. The log book shall record the following:
 - i. the date and time of actions recorded;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilter; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 and July 30 of each calendar year for the preceding six-month period. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 02D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. The Permittee shall establish "normal" for the source in the first 30 days following start-up of the sources. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 02D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 N.2.a above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

O.

- **One No. 2 fuel oil-fired 287 hp emergency fire water pump diesel engine (ID No. ES-31), and**
- **two propane-fired 34 kW emergency generator spark ignition engines (ID No. ES-32A and ES-32B)**

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|---------------------|--|---|
| sulfur dioxide | 2.3 pounds per million Btu heat input | 15A NCAC 02D .0516 |
| visible emissions | 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period | 15A NCAC 02D .0521 |
| HAPs | as defined in specific conditions | 15A NCAC 02D .1111 MACT 40 CFR 63 Subpart ZZZZ |

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources shall not exceed **2.3 pounds per million Btu heat input**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.O.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil or propane in these sources.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than **20 percent opacity** (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1.O.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of No. 2 fuel oil or propane in these sources.

**3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
(40 CFR PART 63 SUBPART ZZZZ)**

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 02D .1111, "Maximum Achievable Control Technology (MACT) as promulgated in 40 CFR Part 63, Subpart ZZZZ, including Subpart A "General Provisions." [15A NCAC 02D .1111]

Monitoring [15A NCAC 02Q .0508(f)]

- b. The Permittee shall comply with the applicable work practice requirements no later than May 3, 2013 for ES-31 and no later than October 19, 2013 for ES-32A and ES-32B. [§63.6595(a)(1)]
- c. The Permittee shall operate and maintain the engines at all times in a manner consistent with safety and good air pollution control practices for minimizing emissions. [§63.6605]
- d. The Permittee shall operate and maintain the engines and after-treatment control device (if any) according to the manufacturer's emission-related written instructions. [§63.6625(e)]
- e. The engines shall be equipped with a non-resettable hour meter. [§63.6625(f)]
- f. The Permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. [§63.6625(h)]
- g. The Permittee shall comply with the applicable work practice requirements in Table 2c of Subpart ZZZZ. [§63.6602]
- h. The Permittee shall operate the emergency stationary RICE according to the following requirements: [§63.6640(f)(1)]
 - i. There is no time limit on the use of emergency stationary RICE in emergency situations.
 - ii. The emergency stationary RICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year.
 - iii. The emergency stationary RICE may be operated up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing.
- i. If any of the above monitoring requirements in this section are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Recordkeeping [15A NCAC 02Q .0508(f)]

- j. The Permittee shall keep records of the maintenance conducted on the stationary RICE in order to demonstrate that the stationary RICE and after-treatment control device (if any) are operated and maintained according to the manufacturer's emission-related written instructions. [§63.6655(e)]
- k. The Permittee shall keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. [§63.6655(f)]
- l. As specified in §63.10(b)(1), the Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [§63.6660]
- m. If any of the above recordkeeping requirements in this section are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111.

Reporting [15A NCAC 02Q .0508(f)]

- n. The Permittee shall report any failure to perform the work practice on the schedule required in Table 2c of Subpart ZZZZ and the Federal, State or local law under which the risk was deemed unacceptable. [Footnote 1 of Table 2c to Subpart ZZZZ]
- o. The notification requirements in §63.6645 do not apply for these existing stationary emergency RICE engines. [§63.6645(a)(5)]

2.2- Multiple Emission Sources

A. Facility Wide Toxics Demonstration

The following table provides a summary of limits and standards for the emission source(s) described above:

| Regulated Pollutant | Limits/Standards | Applicable Regulation |
|----------------------|---|-----------------------|
| toxic air pollutants | Emissions rates modeled to demonstrate compliance with acceptable ambient levels. State Only Requirement See Section 2.2 A.1.b | 15A NCAC 02D .1100 |

State-Only Requirement

1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

- a. Prior to startup of the flyash-fired fluidized bed combustor (ID No. ES-CBO-FBC), CBO feedash silo (ID No. ES-CBO Silo 1), CBO recycle ash silo (ID No. ES-CBO Silo 2), and CBO product dome (ID No. ES-CBO Dome); the Permittee shall submit a complete permit application that includes a toxics demonstration as required by 15A NCAC 2D .1100. All sources at the facility, excluding sources exempt from evaluation in 15A NCAC 2Q .0702, emitting these toxic air pollutants shall be included in the evaluation.
- b. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

| Emission Source | Toxic Air Pollutant | Emission Limit | | |
|---|--|-----------------------|-----------------------|---------|
| | | (lb/yr) | (lb/day) | (lb/hr) |
| wastewater bio-reactor ES-WWTBR | hydrogen sulfide | | 54.7 | |
| Unit 1 dry flyash pneumatic transfer system ES-FA Handling 1 | Arsenic and inorganic arsenic compounds | 7.52x10 ⁻¹ | | |
| | Beryllium | 1.47 | | |
| | Cadmium | 1.44 | | |
| | Manganese and compounds | | 1.76 | |
| | Mercury Vapor | | 5.51x10 ⁻³ | |
| | Nickel Metal | | 5.16x10 ⁻¹ | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 5.59x10 ⁻² | |
| Unit 3 dry flyash pneumatic transfer systems ES-FA Handling 3A ES-FA Handling 3B ES-FA Handling 3C | Arsenic and inorganic arsenic compounds | 2.13x10 ⁻¹ | | |
| | Beryllium | 4.16x10 ⁻¹ | | |
| | Cadmium | 4.07x10 ⁻¹ | | |
| | Manganese and compounds | | 4.98x10 ⁻¹ | |
| | Mercury Vapor | | 1.56x10 ⁻³ | |
| | Nickel Metal | | 1.46x10 ⁻¹ | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 1.59x10 ⁻² | |

| Emission Source | Toxic Air Pollutant | Emission Limit | | |
|---|--|-----------------------|-----------------------|---------|
| | | (lb/yr) | (lb/day) | (lb/hr) |
| Unit 4 dry flyash pneumatic transfer systems ES-FA Handling 4A ES-FA Handling 4B ES-FA Handling 4C | Arsenic and inorganic arsenic compounds | 2.13×10^{-1} | | |
| | Beryllium | 4.16×10^{-1} | | |
| | Cadmium | 4.07×10^{-1} | | |
| | Manganese and compounds | | 4.98×10^{-1} | |
| | Mercury Vapor | | 1.56×10^{-3} | |
| | Nickel Metal | | 1.46×10^{-1} | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 1.59×10^{-2} | |
| flyash conveying system storage and handling silos ES-FA Silo 1 ES-FA Silo 2 ES-FA Silo 4 | Arsenic and inorganic arsenic compounds | 15.9 | | |
| | Beryllium | 30.9 | | |
| | Cadmium | 30.3 | | |
| | Manganese and compounds | | 37.0 | |
| | Mercury Vapor | | 1.16×10^{-1} | |
| | Nickel Metal | | 10.9 | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 1.18 | |
| flyash conveying system storage and handling silo ES-FA Silo 5 | Arsenic and inorganic arsenic compounds | 5.29 | | |
| | Beryllium | 10.3 | | |
| | Cadmium | 10.1 | | |
| | Manganese and compounds | | 12.3 | |
| | Mercury Vapor | | 3.88×10^{-2} | |
| | Nickel Metal | | 3.63 | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 3.93×10^{-1} | |
| No. 1 flyash conveying system storage and handling silo and load-out stations ES-S-1 | Arsenic and inorganic arsenic compounds | 3.57×10^{-2} | | |
| | Beryllium | 6.96×10^{-2} | | |
| | Cadmium | 6.81×10^{-2} | | |
| | Manganese and compounds | | 8.33×10^{-2} | |
| | Mercury Vapor | | 2.61×10^{-4} | |
| | Nickel Metal | | 2.45×10^{-2} | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 2.65×10^{-3} | |
| No. 4 flyash conveying system storage and | Arsenic and inorganic arsenic compounds | 3.57×10^{-2} | | |

| Emission Source | Toxic Air Pollutant | Emission Limit | | |
|--|--|-----------------------|-----------------------|---------|
| | | (lb/yr) | (lb/day) | (lb/hr) |
| handling silo and load-out stations ES-S-4 | Beryllium | 6.96×10^{-2} | | |
| | Cadmium | 6.81×10^{-2} | | |
| | Manganese and compounds | | 8.33×10^{-2} | |
| | Mercury Vapor | | 2.61×10^{-4} | |
| | Nickel Metal | | 2.45×10^{-2} | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 2.65×10^{-3} | |
| No. 5 flyash conveying system storage and handling silo and load-out stations ES-S-5 | Arsenic and inorganic arsenic compounds | 3.57×10^{-2} | | |
| | Beryllium | 6.96×10^{-2} | | |
| | Cadmium | 6.81×10^{-2} | | |
| | Manganese and compounds | | 8.33×10^{-2} | |
| | Mercury Vapor | | 2.61×10^{-4} | |
| | Nickel Metal | | 2.45×10^{-2} | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 2.65×10^{-3} | |
| electrostatic flyash separation system and mineral-rich product load-out silo ES-S-3L | Arsenic and inorganic arsenic compounds | 7.17×10^{-1} | | |
| | Beryllium | 1.40 | | |
| | Cadmium | 1.37 | | |
| | Manganese and compounds | | 1.67 | |
| | Mercury Vapor | | 5.25×10^{-3} | |
| | Nickel Metal | | 4.92×10^{-1} | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 5.33×10^{-2} | |
| two electrostatic flyash separation systems and associated conveying systems ES-EFSS1 ES-EFSS2 | Arsenic and inorganic arsenic compounds | 7.17×10^{-1} | | |
| | Beryllium | 1.40 | | |
| | Cadmium | 1.37 | | |
| | Manganese and compounds | | 1.67 | |
| | Mercury Vapor | | 5.25×10^{-3} | |
| | Nickel Metal | | 4.92×10^{-1} | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 5.33×10^{-2} | |
| six coal storage silos ES-Coal Silo 1 ES-Coal Silo 2 | Arsenic and inorganic arsenic compounds | 2.98 | | |
| | Beryllium | 4.36 | | |

| Emission Source | Toxic Air Pollutant | Emission Limit | | |
|--|--|-----------------------|-----------------------|---------|
| | | (lb/yr) | (lb/day) | (lb/hr) |
| ES-Coal Silo 3 ES-Coal Silo 4 ES-Coal Silo 5 ES-Coal Silo 6 four coal conveyors ES-37A, ES-37B, ES-39A, ES-39B | Cadmium | 4.27 | | |
| | Manganese and compounds | | 5.22 | |
| | Mercury Vapor | | 1.64×10^{-2} | |
| | Nickel Metal | | 1.53 | |
| stationary vacuum system for housekeeping ES-SVS1 | Arsenic and inorganic arsenic compounds | 3.49×10^{-2} | | |
| | Beryllium | 6.80×10^{-2} | | |
| | Cadmium | 6.66×10^{-2} | | |
| | Manganese and compounds | | 8.15×10^{-2} | |
| | Mercury Vapor | | 2.56×10^{-4} | |
| | Nickel Metal | | 2.39×10^{-2} | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 2.59×10^{-3} | |
| flyash conveying system storage and handling silo ES-FA Silo 3 mineral-rich flyash loadout system ES-S-3L2 | Arsenic and inorganic arsenic compounds | 5.29 | | |
| | Beryllium | 10.3 | | |
| | Cadmium | 10.1 | | |
| | Manganese and compounds | | 12.3 | |
| | Mercury Vapor | | 3.88×10^{-2} | |
| | Nickel Metal | | 3.63 | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 3.93×10^{-1} | |
| coal unloading hopper ES-Coal Hopper | Arsenic and inorganic arsenic compounds | 1.37 | | |
| | Beryllium | 2.01 | | |
| | Cadmium | 1.96 | | |
| | Manganese and compounds | | 2.40 | |
| | Mercury Vapor | | 7.54×10^{-3} | |
| | Nickel Metal | | 7.06×10^{-1} | |
| coal conveyor ES-Coal Conv 1 | Arsenic and inorganic arsenic compounds | 1.20×10^{-1} | | |
| | Beryllium | 1.76×10^{-1} | | |
| | Cadmium | 1.72×10^{-1} | | |
| | Manganese and compounds | | 2.10×10^{-1} | |
| | Mercury Vapor | | 6.60×10^{-4} | |

| Emission Source | Toxic Air Pollutant | Emission Limit | | |
|--|---|-----------------------|-----------------------|---------|
| | | (lb/yr) | (lb/day) | (lb/hr) |
| | Nickel Metal | | 6.18x10 ⁻² | |
| coal conveyor ES-Coal Conv 2 | Arsenic and inorganic arsenic compounds | 1.20x10 ⁻¹ | | |
| | Beryllium | 1.76x10 ⁻¹ | | |
| | Cadmium | 1.72x10 ⁻¹ | | |
| | Manganese and compounds | | 2.10x10 ⁻¹ | |
| | Mercury Vapor | | 6.60x10 ⁻⁴ | |
| | Nickel Metal | | 6.18x10 ⁻² | |
| limestone rail unloading station ES-LS Rail two limestone unloading hoppers ES-LS Unload A ES-LS Unload B | Arsenic and inorganic arsenic compounds | 1.88x10 ⁻² | | |
| | Beryllium | 3.48x10 ⁻² | | |
| | Cadmium | 1.03x10 ⁻¹ | | |
| | Manganese and compounds | | 4.80x10 ⁻¹ | |
| | Mercury Vapor | | 1.18x10 ⁻⁴ | |
| | Nickel Metal | | 1.22x10 ⁻² | |
| belt feeder ES-LS Feeder 1 limestone conveyor ES-LS Convey 2 two limestone reclaim hoppers ES-LS Reclaim A ES-LS Reclaim B two belt feeders ES-LS Feeder 3A ES-LS Feeder 3B | Arsenic and inorganic arsenic compounds | 9.42x10 ⁻² | | |
| | Beryllium | 1.74x10 ⁻¹ | | |
| | Cadmium | 5.15x10 ⁻¹ | | |
| | Manganese and compounds | | 2.40 | |
| | Mercury Vapor | | 5.92x10 ⁻⁴ | |
| | Nickel Metal | | 6.11x10 ⁻² | |
| limestone conveyors ES-LS Convey 4A ES-LS Convey 4B ES-LS Convey 5 ES-LS Convey 6 ES-LS Convey 7 three limestone silos | Arsenic and inorganic arsenic compounds | 1.02x10 ⁻¹ | | |
| | Beryllium | 1.88x10 ⁻¹ | | |
| | Cadmium | 5.55x10 ⁻¹ | | |
| | Manganese and compounds | | 2.59 | |
| | Mercury Vapor | | 6.39x10 ⁻⁴ | |

| Emission Source | Toxic Air Pollutant | Emission Limit | | |
|--|--|-----------------------|-----------------------|---------|
| | | (lb/yr) | (lb/day) | (lb/hr) |
| ES-LS Silo A ES-LS Silo B ES-LS Silo C limestone silo storing material for Mayo plant ES-LS Mayo Silo truck loading spout from Mayo limestone silo ES-Truck Spout three wet limestone grinders ES-LS Grinder 1 ES-LS Grinder 2 ES-LS Grinder 3 | Nickel Metal | | 6.59×10^{-2} | |
| Fugitive emissions from coal pile including ash landfill (ID No. IS-36) | Arsenic and inorganic arsenic compounds | 14.6 | | |
| | Beryllium | 27.9 | | |
| | Cadmium | 27.3 | | |
| | Manganese and compounds | | 33.4 | |
| | Mercury Vapor | | 1.05×10^{-1} | |
| | Nickel Metal | | 9.81 | |
| | Soluble Chromate Compounds as Chromium VI Equivalent | | 6.02×10^{-1} | |
| Gypsum emergency conveyor (ID No. IS-38) Emergency gypsum pile (ID No. IS-40) Mayo gypsum rotary feeder (ID No. IS-41) Gypsum conveyor 3 (includes 3a and 3b) (ID No. IS-44) Landfill gypsum loading hopper (ID No. IS-48) Landfill gypsum reclaim belt feeder (ID No. IS-49) | Arsenic and inorganic arsenic compounds | 4.83×10^{-2} | | |
| | Cadmium | 4.55×10^{-1} | | |
| | Manganese and compounds | | 3.15 | |
| | Mercury Vapor | | 1.88×10^{-3} | |
| | Nickel Metal | | 2.48×10^{-2} | |

| Emission Source | Toxic Air Pollutant | Emission Limit | | |
|---|---|-----------------------|-----------------------|---------|
| | | (lb/yr) | (lb/day) | (lb/hr) |
| Off-specification gypsum pile (ID No. IS-45) | Arsenic and inorganic arsenic compounds | 4.38x10 ⁻² | | |
| | Cadmium | 4.13x10 ⁻¹ | | |
| On-specification gypsum pile (ID No. IS-46) | Manganese and compounds | | 2.86 | |
| | Mercury Vapor | | 1.71x10 ⁻³ | |
| | Nickel Metal | | 2.25x10 ⁻² | |

Monitoring/Recordkeeping/Reporting

- c. No monitoring, recordkeeping, or reporting shall apply to any emission sources included in Section 2.2 A.1.b above.

B. Electric generating units:

- **ES-Unit 1**
- **ES-Unit 2**
- **ES-Unit 3A**
- **ES-Unit 3B**
- **ES-Unit 4A**
- **ES-Unit 4B**

Federal-Enforceable Only

1. Cross State Air Pollution Rule (CSAPR) Requirements

For the electric utility boilers (**ID Nos. ES-Unit 1, 2, 3A, 3B, 4A, 4B**), the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NO_x Annual Trading Program", Subpart BBBBB "TR NO_x Ozone Season Trading Program", and Subpart CCCCC "TR SO₂ Group 1 Trading Program".

2. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR PART 63 SUBPART UUUUU)

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission limitations, work practice standards, operating limits, testing and initial compliance, continuous compliance, monitoring, recordkeeping, notification, and reporting, contained in Environmental Management Commission Standard 15A NCAC 02D .1111 Maximum Achievable Control Technology (MACT) as promulgated in the most current version of 40 CFR Part 63 Subpart UUUUU, "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units" and Subpart A General Provisions.

Emission Limitations and Work Practice Standards [15A NCAC 02Q .0508(b)]

- b. The Permittee shall:
- i. limit the emissions of filterable particulate matter (PM) to 3.0E-2 lb/MMBtu or 3.0E-1 lb/MWh; or
limit the emissions of total non-Hg HAP metals to 5.0E-5 lb/MMBtu or 5.0E-1 lb/GWh; or
limit the emissions of individual HAP metals to:

| <u>Constituent</u> | <u>Allowable Level</u> |
|--------------------|---------------------------------|
| Antimony (Sb) | 8.0E-1 lb/TBtu or 8.0E-3 lb/GWh |
| Arsenic (As) | 1.1E0 lb/TBtu or 2.0E-2 lb/GWh |
| Beryllium (Be) | 2.0E-1 lb/TBtu or 2.0E-3 lb/GWh |
| Cadmium (Cd) | 3.0E-1 lb/TBtu or 3.0E-3 lb/GWh |
| Chromium (Cr) | 2.8E0 lb/TBtu or 3.0E-2 lb/GWh |
| Cobalt (Co) | 8.0E-1 lb/TBtu or 8.0E-3 lb/GWh |

| | |
|----------------|--------------------------------|
| Lead (Pb) | 1.2E0 lb/TBtu or 2.0E-2 lb/GWh |
| Manganese (Mn) | 4.0E0 lb/TBtu or 5.0E-2 lb/GWh |
| Nickel (Ni) | 3.5E0 lb/TBtu or 4.0E-2 lb/GWh |
| Selenium (Se) | 5.0E0 lb/TBtu or 6.0E-2 lb/GWh |

- ii. limit the emissions of hydrogen chloride (HCl) to 2.0E-3 lb/MMBtu or 2.0E-2 lb/MWh; or limit the emissions of sulfur dioxide (SO₂) to 2.0E-1 lb/MMBtu or 1.5E0 lb/MWh.
- iii. limit the emissions of mercury (Hg) to 1.2E0 lb/TBtu or 1.3E-2 lb/GWh. [§63.9991(a)(1) and Table 2 to Subpart UUUUU]
- c. As an alternative to meeting the requirements of §63.9991(a)(1) for filterable PM, SO₂, HF, HCl, non-Hg HAP metals, or Hg on an EGU-specific basis as described in paragraph a above, the Permittee may choose to demonstrate compliance by using emissions averaging as described in §63.10009(a)(2) among existing EGUs in the same subcategory. If this option is selected for mercury, the Permittee shall limit the concentration of mercury to 1.0 lb/TBtu or 1.1E-2 lb/GWh. [§63.9991(a)(1), §63.10009 and §63.10022]
- d. During periods of startup of an EGU:
 - i. The Permittee has chosen to comply using the following work practice standards, by choosing to comply using paragraph (1) of the definition of “startup” in §63.10042, defined as follows.

Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup.

The Permittee shall operate all CMS during startup, except during periods of bypass of the main stack as provided in §63.10010(a)(4). For startup of a unit, clean fuels must be used as defined in §63.10042 for ignition. Once the unit converts to firing coal, the Permittee shall engage all of the applicable control technologies except the SCR. The Permittee shall start the SCR system appropriately to comply with relevant standards applicable during normal operation. The Permittee shall comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in Subpart UUUUU. The Permittee shall keep records during startup periods.

- ii. If the Permittee chooses to use just one set of sorbent traps to demonstrate compliance with the applicable Hg emission limit, the Permittee shall comply with the limit at all times; otherwise, the Permittee shall comply with the applicable emission limit at all times except for startup and shutdown periods.
- iii. The Permittee shall collect monitoring data during startup periods, as specified in §63.10020(a) and (e). The Permittee shall keep records during startup periods, as provided in §§63.10032 and 63.10021(h). The Permittee shall provide reports concerning activities and startup periods, as specified in §63.10011(g) and §63.10021(h) and (i). All periods of bypass of the main stack shall be reported as deviations as provided in §63.10010(a)(4)(ii).

[§63.9991(a)(1) and Table 3 to Subpart UUUUU]

- e. During periods of shutdown of an EGU:

Shutdown means the period in which cessation of operation of an EGU is initiated for any purpose. Shutdown begins when the EGU no longer generates electricity or makes useful thermal energy (such as heat or steam) for industrial, commercial, heating, or cooling purposes or when no coal, liquid oil, syngas, or solid oil-derived fuel is being fired in the EGU, whichever is earlier. Shutdown ends when the EGU no longer generates electricity or makes useful thermal energy (such as steam or heat) for industrial, commercial, heating, or cooling purposes, and no fuel is being fired in the EGU. Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown.

- i. The Permittee shall operate all CMS during shutdown, except during periods of bypass of the main stack as provided in §63.10010(a)(4). The Permittee shall also collect appropriate data, and shall calculate the pollutant emission rate for each hour of shutdown for those pollutants for which a CMS is used. While firing coal during shutdown, the Permittee shall vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal being fed into the EGU and for as long as possible thereafter considering operational and safety concerns as provided for bypass of the main stack in §63.10010(a)(4). In any case, the permittee shall operate the controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than Subpart UUUUU and that

require operation of the control devices. All periods of bypass of the main stack shall be reported as deviations as provided in §63.10010(a)(4)(ii).

- ii. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel shall be one or a combination of the clean fuels defined in §63.10042 and shall be used to the maximum extent possible taking into account considerations such as not compromising boiler or control device integrity.
- iii. The Permittee shall comply with all applicable emission limits at all times except during startup periods and shutdown periods at which time the Permittee shall meet the work practice standards. The Permittee shall collect monitoring data during shutdown periods, as specified in §63.10020(a). The Permittee shall keep records during shutdown periods, as provided in §§63.10032 and 63.10021(h). The Permittee shall provide reports concerning activities and shutdown periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031. [§63.9991(a)(1), §63.10042, and Table 3 to Subpart UUUUU]

General Compliance Requirements [15A NCAC 02Q .0508(f)]

- f. The Permittee shall comply with the General Provisions as applicable pursuant to Table 9 to Subpart UUUUU. [§63.10040]
- g. The Permittee shall be in compliance with the emission limits and operating limits in Subpart UUUUU. These limits shall apply at all times except during periods of startup and shutdown; however, for coal-fired EGUs, the Permittee shall be required to meet the work practice requirements in Table 3 to Subpart UUUUU during periods of startup or shutdown. [§63.10000(a)]
- h. At all times, the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.10000(b)]
- i. For coal-fired units, initial performance testing is required for all pollutants for the affected EGUs to demonstrate compliance with the applicable emission limits. [§63.10000(c)(1)]
- j. The Permittee shall demonstrate compliance with the filterable particulate matter (PM) emission limit through an initial performance test and shall monitor continuous performance through use of a PM continuous emissions monitoring system (PM CEMS). [§63.10000(c)(1)(iv)]
- k. The Permittee shall demonstrate initial and continuous compliance by conducting an initial and periodic quarterly performance stack test for HCl. [§63.10000(c)(1)(v)]
- l. The Permittee shall demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent trap monitoring system in accordance with Appendix A to the Subpart. [§63.10000(c)(1)(vi)]
- m. As part of demonstration of continuous compliance, the Permittee shall perform periodic tune-ups of the affected EGUs, according to §63.10021(e). [§63.10000(e)]
- n. On or before the date an EGU is subject to Subpart UUUUU, the Permittee shall install, certify, operate, maintain, and quality-assure each monitoring system necessary for demonstrating compliance with the work practice standards for PM during startup periods and shutdown periods. The Permittee shall collect, record, report, and maintain data obtained from these monitoring systems during startup periods and shutdown periods. [§63.10000(l)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the general compliance requirements in Sections 2.2.B.2.f through n above are not met.

Continuous Compliance Requirements [15A NCAC 02Q .0508(f)]

- o. The Permittee shall monitor and collect data according to §63.10020. [§63.10020(a)]
- p. The Permittee shall operate the monitoring system and collect data at all required intervals at all times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control periods (see §63.8(c)(7)), and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. The Permittee is required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. [§63.10020(b)]
- q. Except for periods of monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation from the monitoring requirements. [§63.10020(d)]
- r. The Permittee shall demonstrate continuous compliance with each emissions limit, operating limit, and work

practice standard in Tables 2 and 3 to Subpart UUUUU that applies to the affected EGU, according to the monitoring specified in Table 7 to Subpart UUUUU and paragraphs (b) through (g) of §63.10021(a). [§63.10021(a)]

- s. Except as otherwise provided in §63.10020(c), if the Permittee uses a CEMS to measure SO₂, PM, HCl, HF, or Hg emissions, or uses a sorbent trap monitoring system to measure Hg emissions, the Permittee shall demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO₂, O₂, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. The Permittee shall use Equation 8 to Subpart UUUUU to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

$$\text{Boiler operating day average} = \frac{\sum_{i=1}^n \text{Her}_i}{n} \quad (\text{Eq. 8})$$

Where:

Her_i is the hourly emissions rate for hour i and n is the number of hourly emissions rate values collected over 30- (or, if applicable, 90-) boiler operating days.

[§63.10021(b)]

- t. Conduct periodic performance tune-ups of the EGUs, as specified in paragraphs (e)(1) through (9) of §63.10021. For the first tune-up, the Permittee may perform the burner inspection any time prior to the tune-up or delay the first burner inspection until the next scheduled EGU outage provided the requirements of §63.10005 are met. Subsequently, the Permittee shall perform an inspection of the burner at least once every 36 calendar months unless the EGU employs neural network combustion optimization during normal operations in which case an inspection of the burner and combustion controls shall be performed at least once every 48 calendar months. If the EGU is offline when a deadline to perform the tune-up passes, the tune-up work practice requirements shall be performed within 30 days after the re-start of the affected unit. [§63.10021(e)]
- u. The Permittee shall follow the startup or shutdown requirements as given in Table 3 to the Subpart for each coal-fired EGU and comply with all applicable requirements in §63.10011(g). [§§63.10005(j), 63.10011(g) and §63.10021(h)]
- v. The Permittee shall determine the fuel whose combustion produces the least uncontrolled emissions, taking safety considerations into account, *i.e.*, the cleanest fuel, either natural gas or distillate oil, that is available on site or accessible nearby for use during periods of startup or shutdown. The cleanest fuel, either natural gas or distillate oil, for use during periods of startup or shutdown determination may take safety considerations into account. [§§63.10011(f)(1) and (2)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the continuous compliance requirements in Sections 2.2.B.2.o through v above are not met.

Monitoring [15A NCAC 02Q .0508(f)]

- w. For an affected unit that exhausts to the atmosphere through a single, dedicated stack, the Permittee shall either install the required CEMS and sorbent trap monitoring systems in the stack or at a location in the ductwork downstream of all emissions control devices, where the pollutant and diluents concentrations are representative of the emissions that exit to the atmosphere. [§63.10010(a)(1)]
- x. If the Permittee uses an oxygen (O₂) or carbon dioxide (CO₂) CEMS to convert measured pollutant concentrations to the units of the applicable emissions limit, the O₂ or CO₂ concentrations shall be monitored at a location that represents emissions to the atmosphere, *i.e.*, at the outlet of the EGU, downstream of all emission control devices. The Permittee shall install, certify, maintain, and operate the CEMS according to 40 CFR Part 75. Use only quality-assured O₂ or CO₂ data in the emissions calculations; do not use Part 75 substitute data values. [§63.10010(b)]
- y. If the Permittee is required to use a stack gas flow rate monitor, either for routine operation of a sorbent trap monitoring system or to convert pollutant concentrations to units of an electrical output-based emission standard in Table 2 to Subpart UUUUU, the Permittee shall install, certify, operate, and maintain the monitoring system and conduct on-going quality-assurance testing of the system according to 40 CFR Part 75. Use only unadjusted, quality-assured flow rate data in the emissions calculations. Do not apply bias adjustment factors to the flow rate data and do not use substitute flow rate data in the calculations. [§63.10010(c)]
- z. If the Permittee is required to make corrections for stack gas moisture content when converting pollutant concentrations to the units of an emission standard in Table 2 to Subpart UUUUU, the Permittee shall install, certify, operate, and maintain a moisture monitoring system in accordance with 40 CFR Part 75. Alternatively, for

coal-fired units, the Permittee may use appropriate fuel-specific default moisture values from §75.11(b) to estimate the moisture content of the stack gas. If the Permittee installs and operates a moisture monitoring system, the Permittee shall not use substitute moisture data in the emissions calculations. [§63.10010(d)]

- aa. The Permittee shall conduct all applicable periodic HCl emissions tests according to Table 5 to Subpart UUUUU and §63.10007 at least quarterly, except as otherwise provided in §63.10021(d)(1). [§63.10006(d)]
- bb. The Permittee shall use a Hg CEMS or a sorbent trap monitoring system, the Permittee shall install, certify, operate, maintain and quality-assure the data from the monitoring system in accordance with Appendix A to Subpart UUUUU and as specified in §63.10010(g). [§63.10010(g)]
- cc. The Permittee shall install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (i)(1) through (5) of §63.10010 (shown below). The compliance limit shall be expressed as a 30-boiler operating day rolling average of the applicable numerical emissions limit value in Table 2 to Subpart UUUUU. [§63.10010(i)]
 - i. Install and certify the PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix B to 40 CFR Part 60, using Method 5 at Appendix A-3 to 40 CFR Part 60 and ensuring that the front half filter temperature shall be $160^{\circ} \pm 14^{\circ} \text{C}$ ($320^{\circ} \pm 25^{\circ} \text{F}$). The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).
 - ii. Operate and maintain the PM CEMS according to the procedures and requirements in Procedure 2—Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to 40 CFR Part 60.
 - (A) Conduct the relative response audit (RRA) for the PM CEMS at least once annually (once per 12 month period).
 - (B) Conduct the relative correlation audit (RCA) for the PM CEMS at least once every 3 (calendar) years.
 - iii. Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in §63.10010(i).
 - iv. Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler operating hours.
 - v. Collect data using the PM CEMS at all times the process unit is operating and at the intervals specified in §63.10010(a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.
 - (A) Use all the data collected during all boiler operating hours in assessing the compliance with the operating limit except:
 - (I) Any data collected during periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities that temporarily interrupt the measurement of emissions (e.g., calibrations, certain audits). Report any monitoring system malfunctions or out of control periods in the annual deviation reports. Report any monitoring system quality assurance or quality control activities per the requirements of §63.10031(b);
 - (II) Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods. Report any such periods in the annual deviation report;
 - (III) Any data recorded during periods of startup or shutdown.
 - (B) Record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with the site-specific monitoring plan.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring requirements in Sections 2.2.B.2.w through cc above are not met.

Recordkeeping [15A NCAC 02Q .0508(f)]

- dd. The Permittee shall keep records of the following:
 - i. Records required under appendix A and/or appendix B to Subpart UUUUU for continuous monitoring of Hg emissions.
 - ii. Each notification and report that is submitted to comply with Subpart UUUUU, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that

- was submitted, according to the requirements in §63.10(b)(2)(xiv).
- iii. Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations, as required in §63.10(b)(2)(viii). [§63.10032(a)]
 - ee. For each CEMS, the Permittee shall keep records as follows:
 - i. Records described in §63.10(b)(2)(vi) through (xi).
 - ii. Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).
 - iii. Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).
 - iv. Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. [§63.10032(b)]
 - ff. For each EGU subject to an emission limit, the Permittee shall keep records of monthly fuel use by each EGU, including the type(s) of fuel and amount(s) used. [§63.10032(d)(1)]
 - gg. If the Permittee elects to average emissions consistent with §63.10009 for any constituent, the Permittee must additionally keep a copy of the emissions averaging implementation plan required in §63.10009(f) and(j), all calculations required under §63.10009, including daily records of heat input or steam generation, as applicable, and monitoring records consistent with §63.10022. [§63.10032(e)]
 - hh. If the Permittee chooses to rely on paragraph (1) of the definition of “startup” in §63.10042 for any EGU, records must be kept of the occurrence and duration of each startup or shutdown. [§63.10032(f)(1)]
 - ii. The Permittee shall keep records of the occurrence and duration of each malfunction of an operation (i.e., process equipment) or the air pollution control and monitoring equipment. [§63.10032(g)]
 - jj. The Permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.10000(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.10032(h)]
 - kk. The Permittee shall keep records of the type(s) and amount(s) of fuel used during each startup or shutdown. [§63.10032(i)]
 - ll. The Permittee shall keep records in a form suitable and readily available for expeditious review, according to §63.10(b)(1). The Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records off site for the remaining 3 years. [§63.10033(a) through (c)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the recordkeeping requirements in Sections 2.2.B.2.dd through ll above are not met.

Reporting [15A NCAC 02Q .0508(f)]

- mm. The Permittee shall submit the reports required under §63.10031 and, if applicable, the reports required under appendices A and B to the Subpart. The electronic reports required by appendices A and B to the Subpart shall be sent to the Administrator electronically in a format prescribed by the Administrator, as provided in §63.10031. CEMS data (except for PM CEMS and any approved alternative monitoring using a HAP metals CEMS) shall be submitted using EPA's Emissions Collection and Monitoring Plan System (ECMPS) Client Tool. Other data, including PM CEMS data, HAP metals CEMS data, and CEMS performance test detail reports, shall be submitted in the file format generated through use of EPA's Electronic Reporting Tool, the Compliance and Emissions Data Reporting Interface, or alternate electronic file format, all as provided for under §63.10031. [§63.10021(f)]
- nn. The Permittee shall report each instance in which the Permittee did not meet an applicable emissions limit or operating limit in Tables 1 through 4 to 40 CFR 63 Subpart UUUUU or failed to conduct a required tune-up. These instances are deemed violations from the requirements of 40 CFR 63 Subpart UUUUU and shall be reported according to §63.10031. [§63.10021(g)]
- oo. The Permittee shall submit all of the notifications in §§63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h), as applicable, by the dates specified, or according to an agreed upon schedule by NCDAQ [§63.9(i)(2)]. [§63.10030(a)]
- pp. When the Permittee is required to conduct a performance test, the Permittee shall submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin. [§63.10030(d)]
- qq. The Permittee shall submit each report in Table 8 to 40 CFR 63 Subpart UUUUU, as applicable. If the Permittee is required to (or elect to) continuously monitor Hg and/or HCl and/or HF emissions, the Permittee shall also submit the electronic reports required under appendix A and/or appendix B to the Subpart, at the specified frequency. [§63.10031(a)]
- rr. The Permittee shall submit each report in Table 8 to 40 CFR 63 Subpart UUUUU, as applicable postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified. [§63.10031(b)]

- ss. The compliance report shall contain the following:
 - i. The information required by the summary report located in 63.10(e)(3)(vi).
 - ii. The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.
 - iii. Indicate whether the Permittee burned new types of fuel during the reporting period. If the Permittee did burn new types of fuel the Permittee must include the date of the performance test where that fuel was in use.
 - iv. Include the date of the most recent tune-up for each EGU. The date of the tune-up is the date the tune-up provisions specified in §63.10021(e)(6) and (7) were completed.
 - v. A certification.
 - vi. If there is a deviation from any emission limit, work practice standard, or operating limit, the Permittee must also submit a brief description of the deviation, the duration of the deviation, emissions point identification, and the cause of the deviation.
 - vii. For each excess emissions occurring at an affected source where the Permittee is using a CMS to comply with that emission limit or operating limit, the Permittee shall include the information required in §63.10(e)(3)(v) in the compliance report specified in §63.10031(c). [§63.10031(c) and §63.10031(d)]
- tt. Each affected source that has obtained a Title V operating permit pursuant to 40 CFR Part 70 or Part 71 shall report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 8 of Subpart UUUUU along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. [§63.10031(e)]
- uu. On or after July 1, 2018, within 60 days after the date of completing each performance test, the Permittee shall submit the performance test reports required by the Subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). The Permittee shall comply with all applicable requirements in §63.10031(f). [§63.10031(f)]
- vv. If the Permittee had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. [§63.10031(g)]

2.3- Permit Shield for Nonapplicable Requirements

This condition is to clarify that issuance of this permit provides no shield from the Act, or regulations promulgated thereunder, including state regulations, pertaining to requirements of the New Source Performance Standards or major or minor new source preconstruction review requirements. The permit may be subject to reopening to include a compliance plan and schedule addressing any past or ongoing noncompliance with those provisions for any affected emission units. [40 CFR 70.6(c)(3), 70.6(f) and 70.7(f)]

The Permittee is shielded from the following nonapplicable requirements as of the date of issuance of this permit based on information furnished with all previous applications. This shield does not apply to future modifications or changes in the method of operation: [15A NCAC 02Q .0512(a)(1)(B)]

- A. 15A NCAC 02D .0537, Control of Mercury Emissions, is not applicable to the boilers because it does not apply to fuel combustion sources.

2.4- Phase II Acid Rain Permit Requirements

ORIS code: 2712

Effective: June 20, 2016 until January 31, 2019

A. Statement of Basis

Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 02Q .0400 and 02Q .0500, and other applicable Laws.

B. SO₂ Allowance Allocations and NO_x Requirements for each affected unit

| SO ₂ allowances, per Tables 2, 3, or 4 of 40 CFR part 73. | | | | | | |
|--|---------|---------|---------|---------|---------|------------------|
| Unit | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 and onwards |
| Boiler No. 1 | 11,108* | 11,108* | 11,108* | 11,108* | 11,108* | * |
| Boiler No. 2 | 19,676* | 19,676* | 19,676* | 19,676* | 19,676* | * |
| Boiler No. 3A | 8,902* | 8,902* | 8,902* | 8,902* | 8,902* | * |
| Boiler No. 3B | 8,902* | 8,902* | 8,902* | 8,902* | 8,902* | * |
| Boiler No. 4A | 10,425* | 10,425* | 10,425* | 10,425* | 10,425* | * |
| Boiler No. 4B | 10,425* | 10,425* | 10,425* | 10,425* | 10,425* | * |

* The number of allowances allocated to Phase II-affected units by U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

| NO _x limits | |
|---|---|
| Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NO _x emissions averaging plan for these units, effective from calendar years 2015 through January 31, 2019. Under the plan, the actual Btu-weighted annual average NO _x emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO _x emission rate for the same units had they each been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for a year under the plan, then this unit shall be deemed to be in compliance for that year with its alternative contemporaneous annual emission limitation and annual heat input limit. In addition to the described NO _x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO _x compliance plan and requirements covering excess emissions. | |
| Boiler No. 1 | If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for a year under the plan and if this unit fails to meet the annual average alternative contemporaneous emission limitation of 0.250 lb/mmBtu or has an annual heat input less than 10,341,180 mmBtu , then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6. |
| Boiler No. 2 | If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for a year under the plan and if this unit fails to meet the annual average alternative contemporaneous emission limitation of 0.250 lb/mmBtu or has an annual heat input less than 15,794,280 mmBtu , then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6. |
| Boiler No. 3A Boiler No. 3B (each) | If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for a year under the plan and if either unit fails to meet the annual average alternative contemporaneous emission limitation of 0.250 lb/mmBtu or has an annual heat input less than 9,331,590 mmBtu , then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6. |

NO_x limits

Boiler No. 4A
Boiler No. 4B
(each)

If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for a year under the plan and if either unit fails to meet the annual average alternative contemporaneous emission limitation of **0.250 lb/mmBtu** or has an annual heat input less than **9,331,590 mmBtu**, then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6

C. Comments, Notes and Justifications - None.

D. Phase II Permit Application and Phase II NO_x Compliance Plan (attached)

The permit applications submitted for this facility, as approved by the Division of Air Quality, are part of this permit. The owners and operators of these Phase II acid rain sources must comply with the standard requirements and special provisions set forth in the following attached applications:

Acid Rain Permit Renewal Application dated June 26, 2014

Phase II NO_x Compliance Plan and Averaging Plan dated June 23, 2015

SECTION 3 - GENERAL CONDITIONS (version 5.1, 08/03/2017)

This section describes terms and conditions applicable to this Title V facility.

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 02Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application;
 - b. changes that modify equipment or processes; or
 - c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
 - d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 02Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 02Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

"Excess Emissions" - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

"Deviations" - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
 - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;
 - nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
 - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. Other Requirements under 15A NCAC 02D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include

noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.

2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. **Duty to Provide Information (submittal of information)** [15A NCAC 02Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a

compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 02Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and

- d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.
Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.
 2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
- W. **Annual Fee Payment** [15A NCAC 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
 2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
 3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.
- X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.
- Y. **Confidential Information** [15A NCAC 02Q .0107 and 02Q .0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.
- Z. **Construction and Operation Permits** [15A NCAC 02Q .0100 and .0300]
A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.
- AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.
- BB. **Financial Responsibility and Compliance History** [15A NCAC 02Q .0507(d)(4)]
The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.
- CC. **Refrigerant Requirements (Stratospheric Ozone and Climate Protection)** [15A NCAC 02Q .0501(e)]
1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
 2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
 3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.
- DD. **Prevention of Accidental Releases - Section 112(r)** [15A NCAC 02Q .0508(h)]
If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. **Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)** – FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. **Title IV Allowances** [15A NCAC 02Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. **Air Pollution Emergency Episode** [15A NCAC 02D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. **General Emissions Testing and Reporting Requirements** [15A NCAC 02Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
 - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
 - i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
 - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.

- iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
- b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. Reopening for Cause [15A NCAC 02Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540]

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. Specific Permit Modifications [15A NCAC 02Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 02Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:

- a. a description of the change at the facility;
- b. the date on which the change will occur;
- c. any change in emissions; and
- d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

List of Acronyms

| | |
|------------------------|--|
| AOS | Alternate Operating Scenario |
| BACT | Best Available Control Technology |
| Btu | British thermal unit |
| CAA | Clean Air Act |
| CSAPR | Cross State Air Pollution Rule |
| CEM | Continuous Emission Monitor |
| CFR | Code of Federal Regulations |
| DAQ | Division of Air Quality |
| DEQ | Department of Environmental Quality |
| EMC | Environmental Management Commission |
| EPA | Environmental Protection Agency |
| FR | Federal Register |
| GACT | Generally Available Control Technology |
| HAP | Hazardous Air Pollutant |
| MACT | Maximum Achievable Control Technology |
| NAA | Non-Attainment Area |
| NCAC | North Carolina Administrative Code |
| NCGS | North Carolina General Statutes |
| NESHAP | National Emission Standards for Hazardous Air Pollutants |
| NO_x | Nitrogen Oxides |
| NSPS | New Source Performance Standard |
| OAH | Office of Administrative Hearings |
| PM | Particulate Matter |
| PM₁₀ | Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less |
| POS | Primary Operating Scenario |
| PSD | Prevention of Significant Deterioration |
| RACT | Reasonably Available Control Technology |
| SIC | Standard Industrial Classification |
| SIP | State Implementation Plan |
| SO₂ | Sulfur Dioxide |
| tpy | Tons Per Year |
| VOC | Volatile Organic Compound |

Attachment 2 to Air Quality Permit 01001T52
Duke Energy Progress, LLC - Roxboro Steam Electric Plant

Phase II Acid Rain Permit Renewal Application

(Received June 26, 2014)

(Five pages)

Attachment 3 to Air Quality Permit 01001T52
Duke Energy Progress, LLC - Roxboro Steam Electric Plant

Phase II Acid Rain Permit NOx Compliance Plan and Averaging Plan

(Received June 26, 2015)

(Five pages)